Chilton's MOTOR AGE

ULY 1954

Annual Reference Issue

STEEL-VENT'S

2 Way Action

DOES IT!

1 REDUCES CYLINDER WEAR

Extra Oil-Carrying Capacity puts more oil on cylinder walls in the wear zone.

2 CONTROLS OIL PUMPING

Extra Oil-Draining Capacity lets excess oil drain back into the crankcase.

Two-Way oil control permits the right amount of oil to circulate the split-second it's needed to protect vital friction zones. The Steel-Vent is designed to meter a generous amount of lubrication up to the compression ring wear zone—holding wear to the absolute minimum.

Steel-Vent design also permits fast drainage of excess oil back to the crankcase. And they can't clog—with every stroke of the piston, Steel-Vents flush away carbon deposits. You'll never see a clogged Steel-Vent.

In hundreds of thousands of re-ring, re-bore and re-sleeve installations, Hastings Steel-Vent Piston Rings have proved they reduce cylinder wear and stop oil pumping.

HASTINGS MANUFACTURING CO. • HASTINGS, MICHIGAN

Piston Rings, Casite, Caslube, Drout, Oil Filters, Spark Plugs

HASTINGS

STEEL-VENT PISTON RINGS

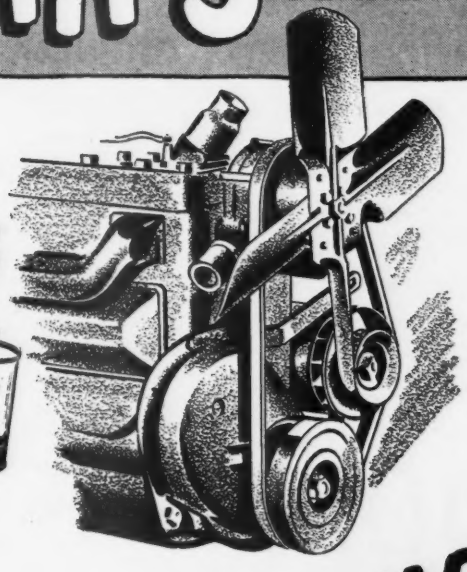
Regular or Chrome-Faced

REDUCE CYLINDER WEAR · CONTROL OIL

SERVICE TIPS FROM PERMATEX

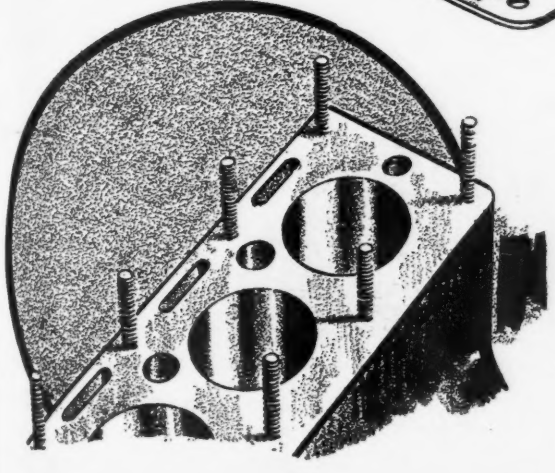
FIX SLIPPING OR NOISY FAN BELTS

A LIGHT COATING OF **AVIATION FORM-A-GASKET NO. 3** MAKES A WONDERFUL BELT DRESSING - STOPS SLIPPING AND NOISE!



SEAL WARPED CYLINDER HEADS

USE **FORM-A-GASKET NO. 1** ON HEAD GASKET TO BUILD BLOCK FLUSH. ASSEMBLE WITH **FORM-A-GASKET NO. 2** TO ALLOW FOR DISASSEMBLY.



STOP STUDS FROM FREEZING AND CORRODING

COAT ALL HEAD STUDS AND BOLTS WITH **AVIATION FORM-A-GASKET NO. 3** TO PREVENT CORRODING OR FREEZING ... MAKES DISASSEMBLY EASY.

Form-A-Gasket withstands the enormous pressures of modern high compression engines. It is unaffected by gasoline, hot or cold oil, grease and water, anti-freeze. Always say PERMATEX Form-A-Gasket when you order sealing compound.

EVERY SHOP NEEDS ALL THREE TYPES

No. 1 — Sets quickly. Dries hard.
No. 2 — Sets slowly. Remains pliable.
No. 3 — Brushable. Sets to a paste. Remains tacky.

FORM-A-GASKET®

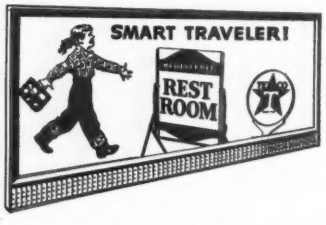
PERMATEX COMPANY, INC., BROOKLYN 35, N. Y.

MORE THAN 50 CHEMICAL PRODUCTS FOR BETTER AUTOMOTIVE MAINTENANCE

2 of America's most popular STOP signs!

2 of America's most powerful Dealer Sales Builders!

Texaco tells the Registered Rest Room story with full pages in color in leading magazines — to an audience of over 50-million!



Billboards all over America deliver the same message — at an average of 30-million times per day!

Wherever these signs are up . . . it's a safe bet *sales* are up, too! More motorists all over America see them every day than any other signs in the service station business.

Behind them is Texaco's powerful advertising program . . . full color in leading magazines . . . eye-catching billboards from coast to coast . . . display, direct mail and other station promotion material.

These signs are a sales-winning combination . . . and just two of the many reasons why *Texaco Dealers are such busy dealers!*

THE TEXAS COMPANY

Chilton's MOTOR AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

Reg. U. S. Pat. Off.

Member SBME Society of Business Magazine Editors — ABC — NBP

For THE AUTOMOTIVE SERVICE INDUSTRY

LXXIII, No. 8 **July, 1954**

In This Issue...

G. C. Buzby, President and Manager Automotive Division
E. H. Miller, Adv. Mgr. E. W. Hevner, Cir. Mgr.
Charles W. Hevner, Research Mgr.

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One of the Publications Owned by
CHILTON COMPANY (INC.)
Executive Offices
Chestnut & 56th Streets, Philadelphia 39, Pa., U. S. A.

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MOTOR AGE, Vol. LXXIII, No. 8. Published monthly by Chilton Co., Chestnut & 56th Sts., Phila. 39, Pa. Entered as Second Class Matter December 27, 1935, at the Post Office at Philadelphia, Pa.; Under the Act of Congress of March 3, 1879. In case of Non-Delivery Return Postage Guaranteed. Subscription price: United States, United States Possessions, $3.00 per year. Canadian $5.00; foreign $7.00 per year; single copies, 40 cents.

Ever have a big-time hunch that paid off right now?

Some of a man's best ideas start as a *hunch.* They sneak up on him, then they grow till . . . *bang!* He's *got* it!

If you've had a hunch about American Motors . . . you may well have a big idea by the tail. For the merger of Hudson with Nash has created an opportunity in some territories to get in on the ground floor as a Hudson dealer; to prosper and grow with a powerful new force in American industry.

Already the strength and enthusiasm of this new Hudson Division has extended to Hudson dealers everywhere . . . not only in exciting plans for the future, but in practical merchandising plans that can show up in profits now.

What to do about it? . . . To men of foresight, the Hudson franchise is something to look into. The thing to do is write, wire or see: C. A. J. Hadley, Sales Manager, Hudson Division, American Motors, Detroit 32, Michigan.

HUDSON

DIVISION OF AMERICAN MOTORS

Dealers like it... spray men like it!

...because Lion Nokorode is sprayed on thinner (1/16"), dries faster, lasts longer, goes farther... Makes the whole operation from application of pressure to the clean-up job *easier, more economical.* Nokorode is a *concentrated,* Uniform Undercar Sealer and Silencer that assures you of customer satisfaction... and at the same time gives you *50%* more undercoating jobs from every drum!

Made from start to finish and guaranteed by Lion Oil Company. For complete details about Nokorode and how you can increase undercoating profits, clip this coupon NOW, and mail to Lion Oil Company, El Dorado, Arkansas.

Made under the process of U. S. Patent No. 2393774

by

LION OIL COMPANY

EL DORADO, ARKANSAS

LION

Lion Oil Company
Dept. MA-G
El Dorado, Arkansas

Please send me free complete information about Lion NOKORODE, the quicker, easier, more economical Undercar Sealer and Silencer.

Name_____

Street_____

City_____ State_____

How to increase your Brake Service Profits

Ask yourself these questions— you will profit from the answers

1. "Am I getting all the brake service business that I should?"

You are if you are pulling wheels on every car, if you are installing Raybestos quality, if you are tying in with Raybestos national advertising, and if you are using the sales help and service information provided by Raybestos.

2. "Do customers really know good brake work when they get it?"

Yes, automatic transmissions, power brakes, etc., are making car owners conscious of the need for better linings. Use Raybestos combinations, scientifically engineered for every car make and model and customers will recommend their friends to you.

3. "What brand of linings can I absolutely count on to eliminate comebacks?"

Raybestos Proving Ground Tested Linings, riveted or bonded—the only ones made by seven different manufacturing processes. They are tested on laboratory dynamometers, given grueling accelerated road tests, and are branded for your protection.

4. "How can I build better customer relations?"

Use the Raybestos Brake Certificate packed with all lined shoes and in all boxed sets. This written proof of safety, advertised month after month in the Post and Farm Journal, will give people extra confidence in you, help you build up all ends of your business.

Don't let your customers learn about bad brakes by accident!

Reline with **Raybestos®**

GET IT FROM YOUR JOBBER

AMERICA'S BIGGEST SELLING BRAKE LINING

RAYBESTOS DIVISION of Raybestos-Manhattan, Inc., BRIDGEPORT, CONN.

RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Clutch Facings • Fan Belts • Radiator Hose • Industrial Rubber, Engineered Plastic, and Sintered Metal Products • Rubber Covered Equipment • Asbestos Textiles • Packings • Abrasive and Diamond Wheels • Bowling Balls

Hatfield Bros., High at Runnion, Fort Wayne, make money on their McCaskey—it produces!

HE FOUND $2,000

WITH McCASKEY CONTROLS

That's Bill Hatfield, Hatfield Bros., Fort Wayne, Indiana. In December, 1952 he was told that with the McCaskey D-102 "Blue Ribbon Automatic Bookkeeper," made especially for the filling station, he should make an extra $1000 per year by eliminating shortages on gasoline and developing charge account business on a McCaskey controlled basis.

Thirteen months later, February, 1954, Bill Hatfield knew the answers. Said he:

"Looked at other registers but decided to buy the McCaskey because it was the most complete system and the best buy for my money.

"It is now thirteen months later and I am most happy to tell anyone and everyone that THIS SYSTEM HAS NOT ONLY PAID FOR ITSELF—BUT HAS BOUGHT AN EXTRA $2000 WORTH OF EQUIPMENT DURING THIS PAST YEAR WITH ABOUT THE SAME VOLUME OF BUSINESS."

In your service station—in your repair garage—in your business where you supply automotive needs ranging from gasoline and oil to parts and labor . . . McCaskey COMPLETE SYSTEM makes practical control easier and simpler.

- **You item-add your transactions mechanically and KNOW YOU ARE CORRECT!**
- **You print your charge sales records and KEEP ACCOUNTS BALANCED TO DATE!**
- **You detect shortages in gasoline and oil, accessories and parts and RECOVER LOSSES *BEFORE YOU SUFFER FINANCIALLY!***
- **You CERTIFY necessary receipts and paid-outs and control them!**
- **You have your fingers on the business—WHETHER YOU ARE THERE OR NOT!**

ARE YOU WITHOUT THE THOROUGHNESS OF McCASKEY COMPLETE CONTROL? YOU PAY FOR IT ANYWAY! ASK TO SEE WHY McCASKEY ADVANTAGES MEAN SO MUCH TO YOU.

McCaskey Register Division, Alliance, Ohio

SEND INFORMATION ON THE PRODUCTS CHECKED:

( ) McCaskey Gasoline Shortage Control Cash Register System
( ) McCaskey Charge Account Control System
( ) McCaskey Steel Safe
( ) McCaskey Portograph and Sales Books

NAME..... ADDRESS.....

CITY..... STATE.....

McCASKEY REGISTER DIVISION, Victor Adding Machine Co., ALLIANCE, OHIO

In Canada, Galt; in England, Watford

Jobbers:

YOU NEED MORE THAN CUT PRICES AND STRETCHED DISCOUNTS

to hold your replacement parts market against new BILLION DOLLAR COMPETITION

YOU NEED GOOD LINES OF REPLACEMENT PARTS:

- Carefully made by reliable manufacturers
- Honestly priced for fair profit margin
- Actively merchandised for fast turnover
- Nationally advertised for trade acceptance

. . . and you need this new study of the new General Motors replacement parts program, privately printed by Arrow Armatures Company, as a service to the industry.

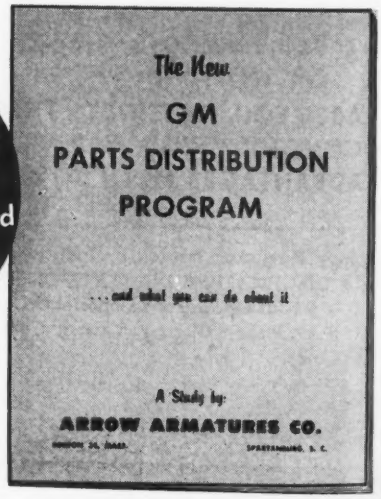
It is FREE to established Jobbers ($1.00 per copy to all others.) Write on your company letterhead to:

Jobber Service Department

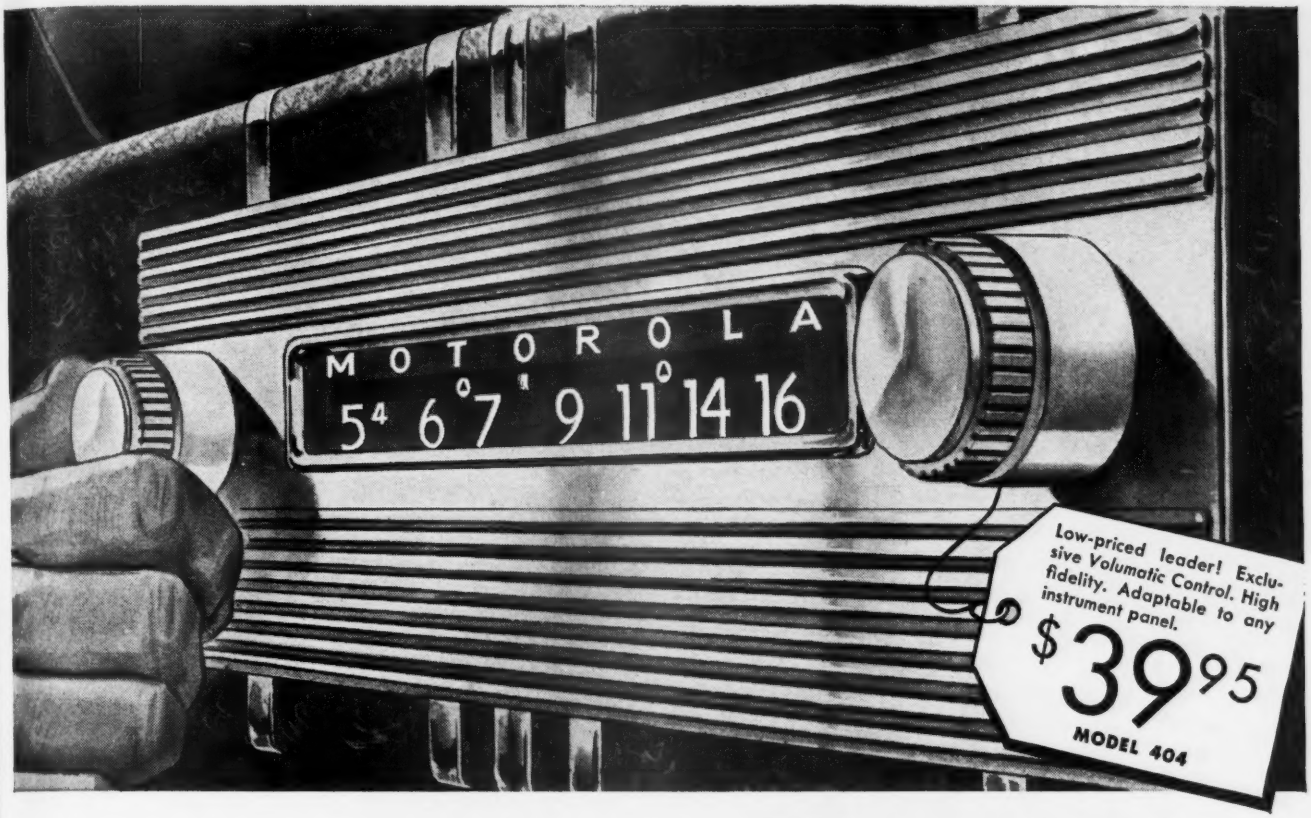
ARROW ARMATURES CO.

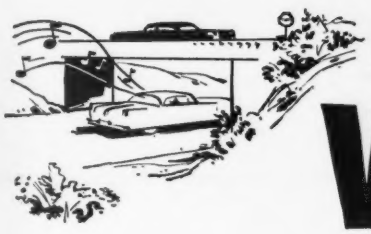
15 Fordham Rd. • Boston 34, Mass.

FREE to established Jobbers



YOUR volume won't fade out if you stock up now!





Exclusive Motorola VOLUMATIC CONTROL!

Holds volume level automatically under bridges, viaducts, underpasses . . . anywhere a signal is available!

It's the greatest selling feature in car radios today—and it's exclusive with Motorola! New *Volumatic Control* is the most highly advanced improvement in auto radio circuit design in 25 years . . . makes all other car radios obsolete! Volume level locks electronically—radio stays steady, sharp, static-free even while going under bridges, viaducts—anywhere there is a signal. *Volumatic Control* is offered to your customers at no increase in price. Take advantage of this sensational opportunity to boost sales and profits. Stock the world's most advanced car radio—Motorola with *Volumatic Control*—to meet your customers' new demand.

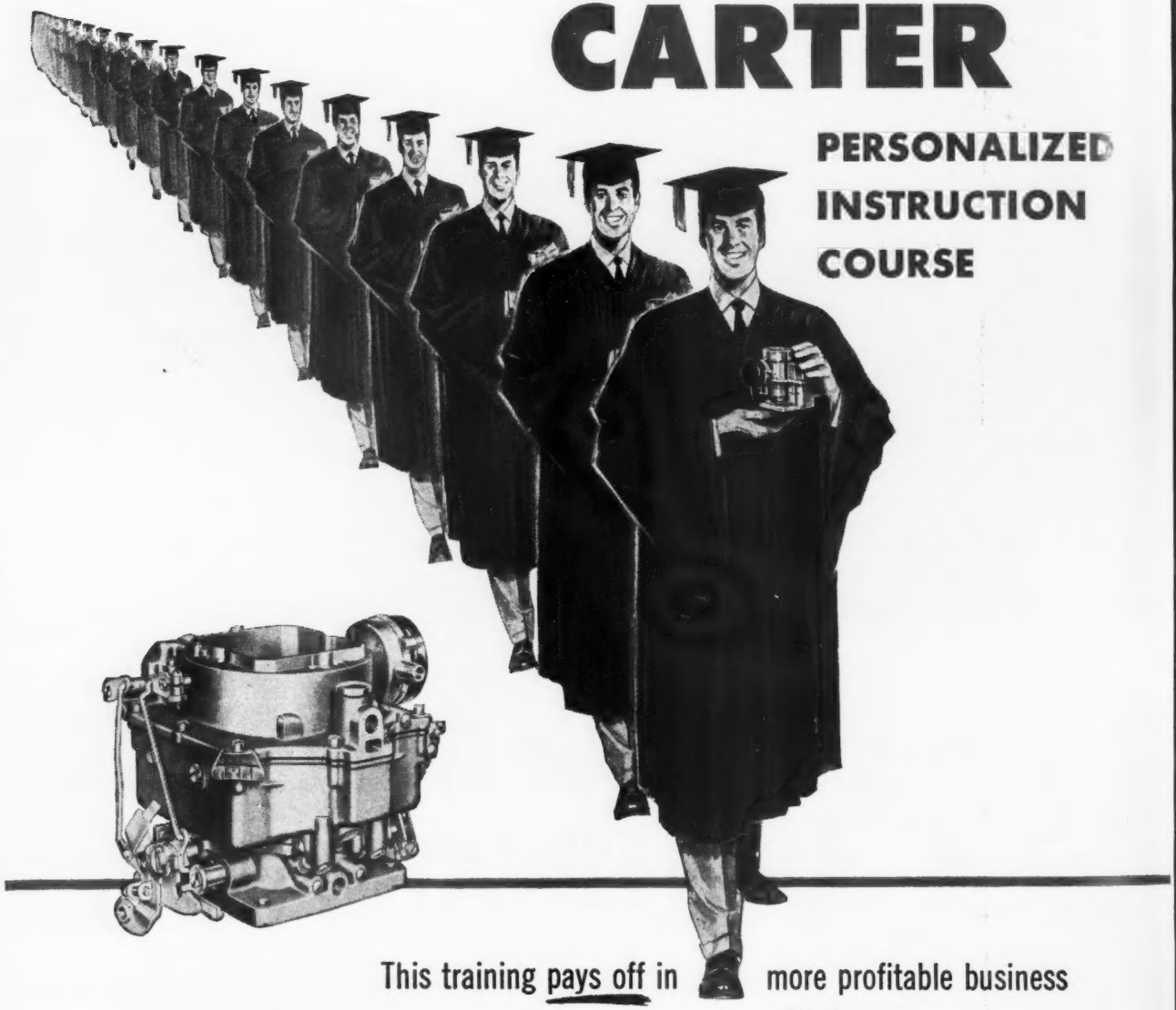
Just 3 sq. feet of display space puts you in the money-making Motorola car radio business. For full details, see your local Motorola distributor.

MODEL 554

Push-button luxury at a budget price! Exclusive Volumatic Control. 5-station push-to-lock control locks in stations razor sharp. **$54.95**

Motorola
CAR RADIO

23,000 Graduates Prove the Value of the CARTER PERSONALIZED INSTRUCTION COURSE



This training pays off in more profitable business with famous

CARTER POWER CENTER® CARBURETERS

There's nothing lightweight about this school! It's a thorough carbureter service course—conducted by Carter-trained experts—and held right in your vicinity.

More than 23,000 repairmen from coast to coast have completed the course . . . have become more valuable to their employers—or in their own business—by acquiring new service skills.

Enroll yourself or send a service man! For full information about the Personalized Instruction Course, see your nearby Carter distributor or write us direct.

CARTER CARBURETOR CORPORATION • St. Louis 7, Missouri
DIVISION OF AMERICAN CAR AND FOUNDRY COMPANY

read how **Bench-Rack** owners

increase body shop labor output

25% to 40%

3 BENCH-RACKS

So they bought 2 more!

HOLLAND AUTO REBUILD, Kent, Wash., states, "Our first *Bench-Rack* helped one of our body men save 30% of his time, yet turn out better work, *so we ordered two more.*"

2 BENCH-RACKS

Tried one, bought 6!

BILL KUHN, NORTH SIDE CHEVROLET, Inc., Indianapolis, Ind., writes, "A five week study showed us *Bench-Rack* upped labor sales 25%. As a result, we installed six.

6 BENCH-RACKS

No more space . . . output up 30%!

LEE MOTORS (Ford dealer), Toledo, Ohio, states, "*Bench-Rack* has stepped up our shop productivity a conservative 30%, greatly contributed to our service absorption."

Meet today's competitive challenge!

This is *Bench-Rack!* It includes all the *Porto-Power* hydraulic items and auxiliary equipment listed below — and it's ALL necessary for *full profits today!*

- 10-piece Bantam Pull Clamp Kit
- 20-piece 10-ton Pull Clamp Kit
- 16 pieces of Bantam Lock-on Tubing
- 15 pieces of 10-ton Lock-on Tubing
- 20 additional Bantam and 10-ton attachments
- 4 hydraulic rams, 2 pumps, 1 spreader
- Heavy-duty steel workbench
- Body section holding fixtures
- Improved door bar
- Silhouetted tool panels
- Individual service sign

NEW **Porto-Power®** SYSTEM BOOSTS INCOME WITHOUT INCREASING OVERHEAD

Here's the revolutionary answer to keeping *profits up* despite tighter competition, mounting overhead and declining income from other departments. A *well organized* body shop is a gold mine — and *this* is how to organize it. Simply furnish each body man with his own *Bench-Rack* work center. It has all the *Porto-Power* equipment he needs to handle rough-out and alignment work — on or off the car. As a result, you'll get 25% to 40% more output per body man . . . conserve valuable skilled manpower . . . save space . . . and be able to organize and merchandise your body shop to its fullest, most profitable advantage!

So ask your Blackhawk jobber *right now* to show you how this equipment gives you more "dollars from damage." Or write Blackhawk Mfg. Co., Dept. P-674, Milwaukee 1, Wis.

BLACKHAWK®

Porto-Power and Bench-Rack are the exclusive (trademark registered) products of Blackhawk Mfg. Co.

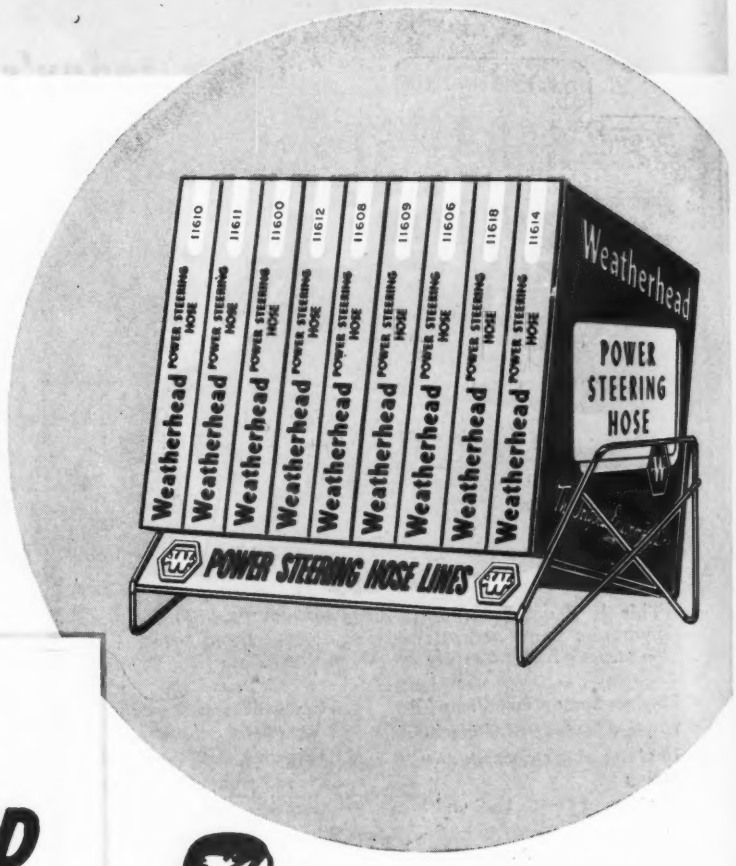
WEATHERHEAD

POWER STEERING LINES

STANDARD ON ALL CARS

Your best replacement buy

For pressure and return hose assemblies, you can't beat Weatherhead—the Original Equipment Line—first choice for Buick, Cadillac, Chevrolet, Chrysler, DeSoto, Dodge, Hudson, Lincoln, Oldsmobile, Packard and Pontiac. Your Weatherhead jobber carries a complete stock—28 types in all. The Weatherhead Company, Automotive Distributor Division, Dept. D, 300 East 131st Street, Cleveland 8, Ohio.



Get them from your Weatherhead jobber.

WEATHERHEAD

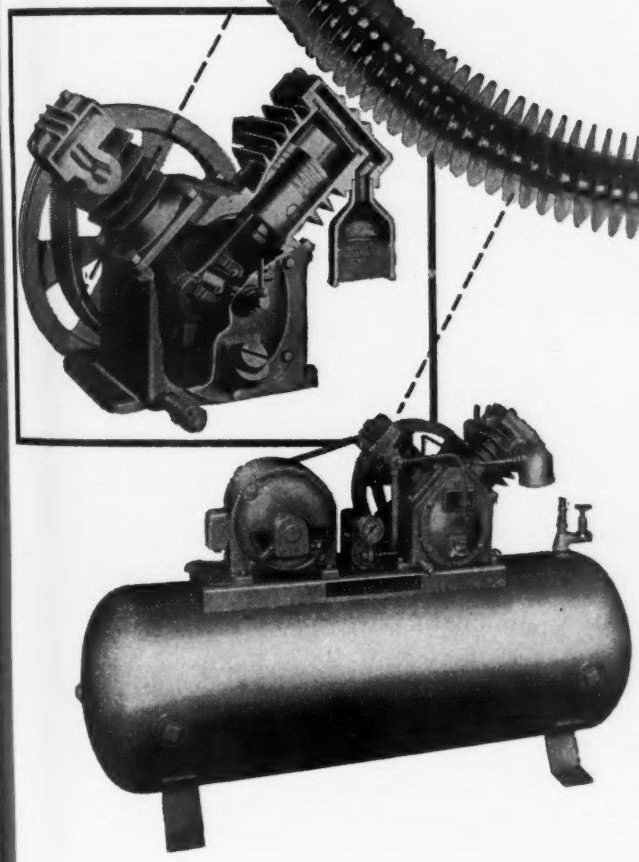
THE ORIGINAL EQUIPMENT LINE

"Remember that Weatherhead is the line EASY to stock, EASY to sell, EASY to install," *says Capt. EASY*

they take off the HEAT

to give you more COLD CASH

Intercoolers on Ingersoll-Rand Compressors dissipate heat f-a-s-t to give you longer lasting compressors—trouble-free service.



These finned intercooler tubes are one of the most efficient means known to take the heat out of compressed air. They are standard on every I-R Type 30 Compressor.

But the story doesn't stop there. The bigger the compressor, the more heat must be dissipated —and the best answer isn't just to increase the diameter of the tube. A smaller stream of air is easier to cool, so I-R uses the more expensive multiple-intercooler tube system. For example, there are 23 of these tubes used on an I-R 15 horsepower unit.

This intercooler gives you several advantages. It is more efficient. In the event of trouble, these smaller tubes are easier and less costly to replace. The extra efficiency results in cooler running—less valve maintenance—longer lasting machines.

Add it all up and the total is more compressor for your money—more cold cash in your pocket over the many years of service you'll get from your I-R Type 30 Compressor. For more information, call your I-R Jobber today, or write:

ORIGINATORS OF IMPACTOOLS-AIR AND ELECTRIC **Ingersoll-Rand**

11 Broadway, New York 4, N. Y. 3-14

TO THE TOP

R. A. STRANAHAN, PRESIDENT
F. D. STRANAHAN, TREASURER

CABLE ADDRESS "CHAMPION"

CHAMPION SPARK PLUG COMPANY

FELTHAM, ENGLAND — PARIS, FRANCE — WINDSOR, CANADA

TOLEDO 1, OHIO, U.S.A.

July 1, 1954

Dear Champion Dealer:

We consider it part of our job to do everything we can to make your job easier. And we believe you'll find that our new Service Department booklet, "Easier Steps To Spark Plug Installation", just off the press, will be mighty helpful to you and your employees.

Three months work went into setting up and testing the installation procedures shown in easy-to-follow pictures and text. You'll wonder how you ever got along without it. Here, for the first time, are the easy, labor-saving and approved methods of installing spark plugs step by step.

Removal of heater ducts and similar under-hood accessories, required to change plugs on some of the new cars, presents no problems when following the clearly pictured procedures. Suitable tool combinations for each installation also are listed in this handy manual.

"Easier Steps To Spark Plug Installation" will cut your labor costs, help you to do a better job and give you a "know-how" advantage over your competition. And it's free. Just ask your Champion salesman.

Sincerely,

Jim L

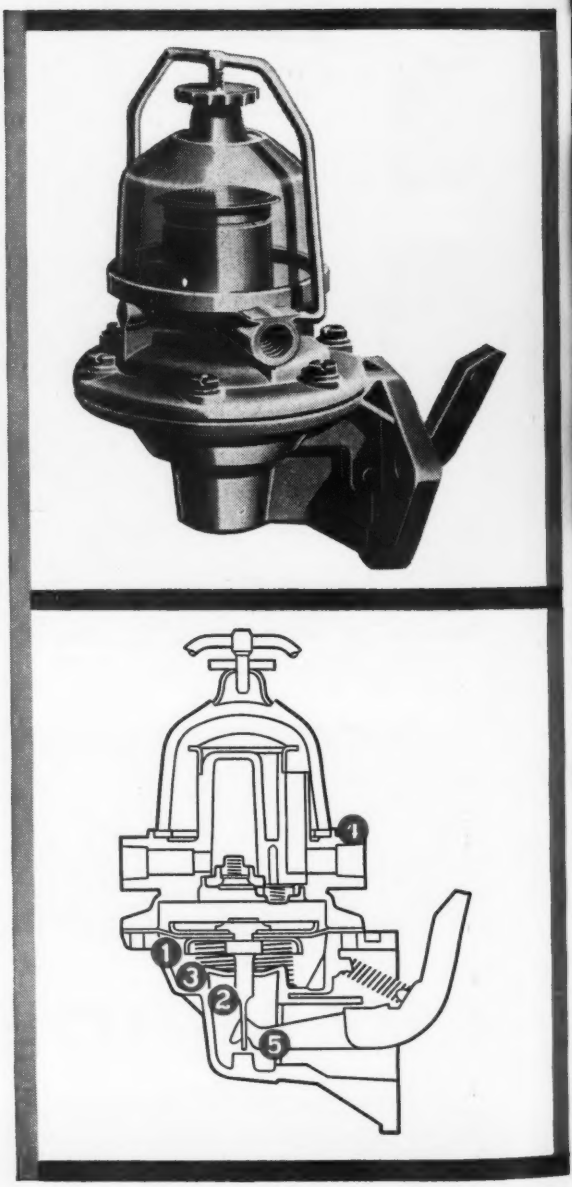
P. S. It was Champions all the way in this year's Indianapolis "500". Here are two important facts for your customers: Every car in the race used Champions – the first unanimous spark plug choice in Indianapolis Race history. Now, here's the payoff – NOT ONE CHAMPION SPARK PLUG WAS REPLACED IN THE ENTIRE RACE!

ASPA Member Since 1927

DEALERS IN THE NATION

Make more AC FUEL PUMPS Sales

by talking preventive maintenance



Your customers will appreciate your telling them that normal wear finally lowers fuel pump efficiency

There's a potential fuel pump replacement sale on every car over two years old—and since 9 out of 10 vehicles have AC Fuel Pumps, the AC line is your natural route into this big market. Replacing fuel pumps before normal wear cuts into their efficiency too far is sound business policy—good for the customer, good for you. AC is doing a powerful advertising job to support you. Car owners are being sold the superior features of AC Fuel Pumps, and are being told that their fuel feed systems need checking. Cash in on this great AC pre-selling effort.

Always remember that AC has all these $elling features

1 **LONGER LIFE**—Only AC has a 4-layer diaphragm . . . a 4-to-1 safety margin over other fuel pumps. Special *patented* impregnation resists all fuel additives.

2 **GREATER DEPENDABILITY**—Sludge seal forms water- and dirt-proof barrier between pump and crankcase, prevents corrosion of inner workings of pump.

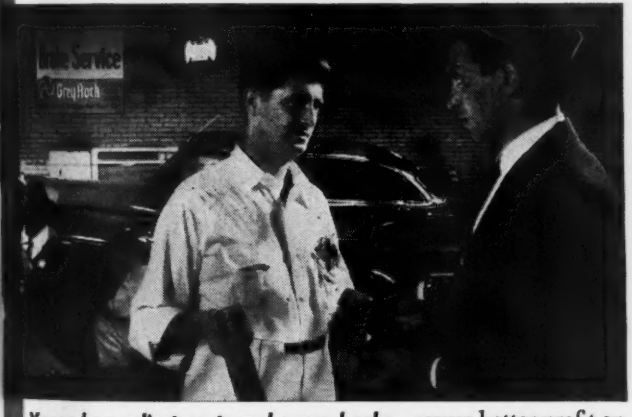
3 **TOP PERFORMANCE**—carefully calibrated spring meters gas at exact pressure and flow for top all-round performance.

4 **MORE DURABLE**—Many separate tailored metal alloys, each engineered and made to order for specific performance.

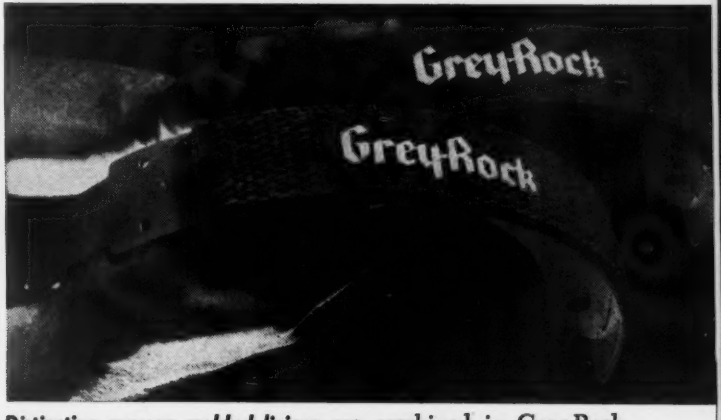
5 **LESS WEAR**—segmented arm assures long pump life, because under ordinary operating conditions only 1/64 inch of motion supplies plenty of gas.

AC SPARK PLUG DIVISION GENERAL MOTORS CORPORATION
FLINT, MICHIGAN

"I'm sorry I smashed it, Jim. I put on the brakes but they just wouldn't hold." When your customers have trouble like this, they become good prospects for regular brake inspection and a reline job when needed – with Grey-Rock, of course.



You reduce adjustments and come-backs—assure better profit on each job—with Grey-Rock *Balanced* Linings. For with Grey-Rock, balance is not just a matter of high and low friction linings; it is the result of using many different linings in combinations properly engineered for each make and model. This exclusive Grey-Rock balance principle provides fast, safe stops, and equalizes lining wear.



Distinctive woven-molded linings are combined in Grey-Rock Balanced Braksets and Trucksets for the specially severe brake requirements of certain makes and models. Where used, woven-molded combinations provide far better brake action than molded linings alone. In other sets, special molded types are used where all-molded combinations give best results. This is a distinctive Grey-Rock feature!

See your Grey-Rock jobber for

FACTORY-BONDED SHOE EXCHANGE

It's the lining that counts

Every piece branded for your protection

★

Consistently advertised in

POST and **Country Gentleman**

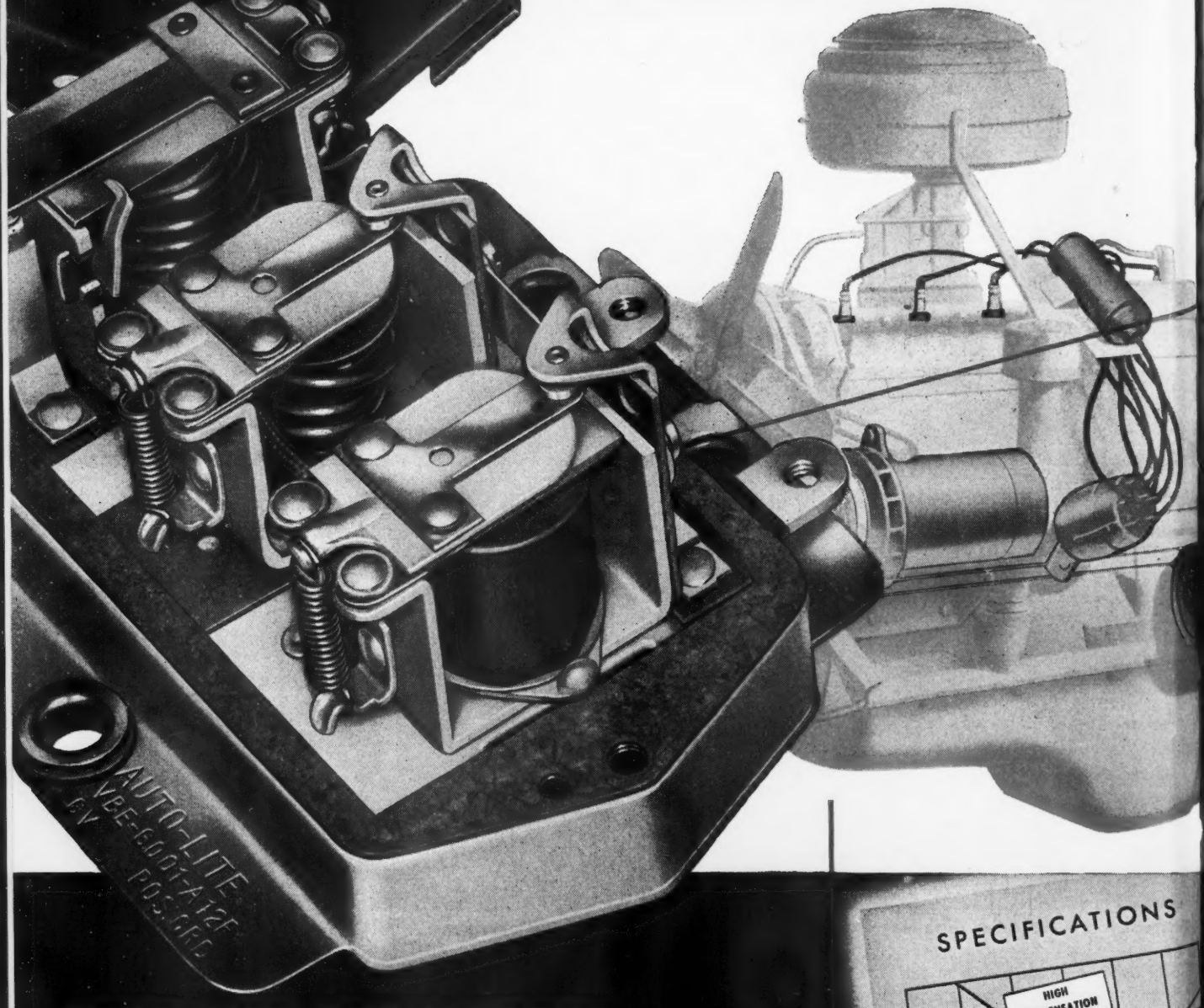
Only Grey-Rock makes

BALANCED BRAKSET LININGS

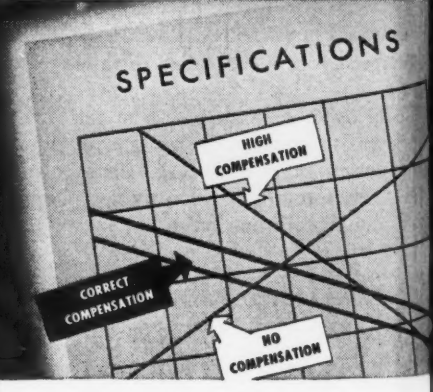
GREY-ROCK DIVISION of Raybestos-Manhattan, Inc., Manheim, Pa.

RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Clutch Facings
Fan Belts • Radiator Hose • Industrial Rubber, Engineered Plastic, and Sintered Metal Products
Rubber Covered Equipment • Asbestos Textiles • Packings
Abrasive and Diamond Wheels • Bowling Balls

How to



AUTO-LITE REGULATORS... like all Auto-Lite service parts, are related to the complete electrical system by Auto-Lite engineering, design and manufacturing skill to give your customers the best performance money can buy. Auto-Lite Regulators are always sold as complete units.

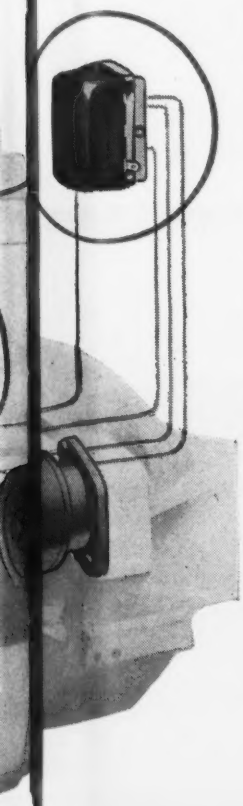


AUTO-LITE BACKS DEALERS with "Suspense!" on the coast-to-coast CBS TV network . . . national ads in leading publications . . . a huge ready-made market of many million Auto-Lite equipped vehicles . . . plus field help, world-famous training schools, informative catalogs and specifications, mat service and promotional material.

AUTO-LITE CONTROL provides correct compensation through complete temperature range—from zero to 140 degrees—to within a plus or minus two percent of the specified value. These specification curves are *published*—there's no guesswork—no shifting of responsibility—a protection for you and a guarantee of greater performance.

build your reputation

...and assure a sound future!



MATCH YOUR HONEST WORKMANSHIP WITH THE QUALITY OF ORIGINAL SERVICE PARTS

THROUGH constant improvement and development . . . through use of the best, and often more costly, design, manufacture and materials . . . Auto-Lite automotive electrical systems, and the parts in the system, maintain the highest standards of quality.

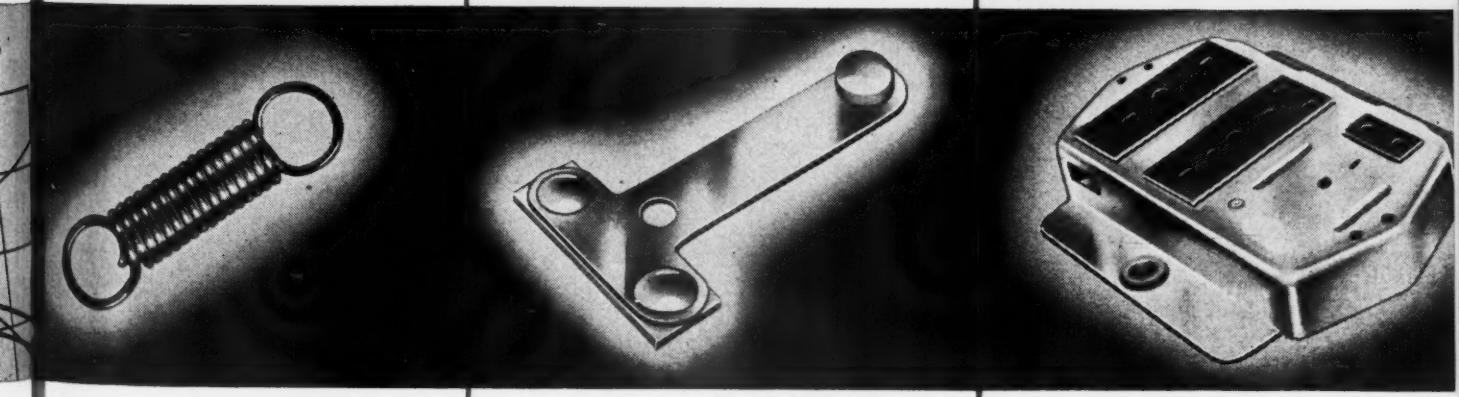
This quality may cost slightly more but it's worth more! It builds your reputation . . . builds a sound future business from repeat sales . . . *assures you greater customer satisfaction.* Whether it's ignition coils, condensers, voltage regulators, generator brushes . . . or complete electrical systems . . . when you check detail by detail, you know Auto-Lite quality cannot be beat!

More than half of America's car makers specify Auto-Lite. When servicing Auto-Lite equipped cars, be sure to recommend and install Auto-Lite Original Service Parts* to protect yourself and your customer. And display the Auto-Lite Original Service Parts sign.

THE ELECTRIC AUTO-LITE COMPANY
Parts & Service Division
Toledo 1 **Ohio**

This sign identifies you as a source of Auto-Lite Original Service Parts*

*Original Service Parts are those specified by the car manufacturer



AUTO-LITE ADJUSTING SPRINGS which control the action of the contact reeds, are made of carefully controlled alloy to retain the permanency of their settings. A permanent tension of the adjusting springs is essential in maintaining correct voltage regulation over long periods . . . another unseen difference in Auto-Lite Service Parts that means greater customer satisfaction.

AUTO-LITE CONTACT REEDS are made of stainless steel. This prevents corrosion, which would lead to improper operation, and prolongs the life of the unit. Corrosion may cause the contacts to stick, cause the generator or the battery, or both, to fail. The use of stainless steel is another example of how Auto-Lite uses every means to deliver top quality.

AUTO-LITE INSULATION used in the base of the Auto-Lite regulator is manufactured to have a minimum of cold flow and moisture absorption, while maintaining maximum insulating qualities. Auto-Lite engineers know this better insulation is more costly but once again, it is long life and not economy in manufacture that is the deciding factor.

NOW! NATIONAL order

Small Order-matic Cabinet: Front wheel seals for all popular cars

Large Order-matic Cabinet: Front and rear wheel seals, for garages, brake shops

new

NATIONAL ORDER-MATIC CABINETS

Large, easy to read identifying numbers tell at a glance whether your stock is complete—or dangerously low on popular numbers. You get the cabinet, plus complete interchange catalog, free with the stock. The unmarked "extra" bins in all National Order-matic cabinets are for popular wheel bearings you use in quantity.

matic

OIL SEAL SERVICE STOCKS

You'll never again have to watch overhead mount while a customer's car waits for oil seals. New National Order-matic Oil Seal Service Stocks insure the right seal on hand when needed. And—again to save you time, trouble and cost—they warn you the minute you're running low on popular oil seals.

National Order-matic Cabinets have each bin identified with the proper seal number. You can check stock at a glance, and speed ordering; stocks stay neat, you find the right seals instantly.

Get a National Order-matic Service Stock in your shop today! Then you'll have seals you need, when needed. Two stocks: a fast moving front wheel selection for lube stations, and a large front and rear wheel stock for garages and brake shops. The big red all-steel cabinet, plus complete interchange information, is FREE with the stock.

CALL YOUR JOBBER TODAY FOR YOUR NATIONAL ORDER-MATIC SERVICE STOCK

(If you already have a National Oil Seal Cabinet, your jobber's on the way to install the Order-matic feature FREE!)

"Whenever you take out an oil seal, ALWAYS replace it with a NEW one"

Support this industry-wide program

NATIONAL MOTOR BEARING CO., INC.
General Offices: Redwood City, Calif.
Plants: Redwood City, Calif.; Van Wert, Ohio

2083

NATIONAL
OIL & GREASE SEALS
O-RINGS SHIMS

Approved original equipment for all cars, trucks, buses and tractors

Remember "JUST-AS-GOOD" JIM?

Always was so gullible...
Believed the wildest claims
Accepted any brake lining
Regardless of brand names.
He learned the awful truth
The hardest possible way
Unfortunately for us all
It's wisdom he can't convey.

You can depend upon WAGNER QUALITY because Wagner Products are used as original equipment by car, bus, truck, and trailer manufacturers.

Est. 1891 **Wagner** ...the best known name in brake service

Safe brakes save lives... reline with

WAGNER® CoMaX BRAKE LINING

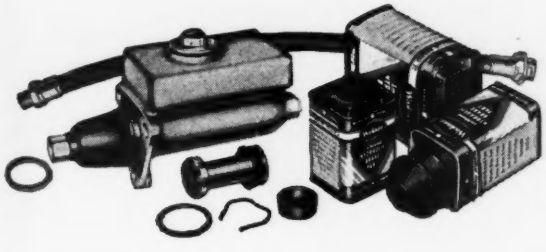
...high quality assures maximum safety

Don't doom innocent lives, property, and even your business itself by neglecting brakes or making a wrong choice of brake lining replacement. Buy Wagner CoMaX Brake Lining and be safe.

As a pioneer manufacturer of hydraulic brakes, Wagner knows what qualities are required in brake lining, and those qualities are found in Wagner CoMaX Brake Lining. Its uniform blend of excellent frictional elements assures quick, safe, smooth stops over an extra-long operating life.

Wagner CoMaX contains no abrasive materials to injure drums. It will never compress, absorb moisture, or deteriorate with age. Withstands excessively high operating temperatures. Coverage is complete for every car, truck, trailer, or bus. Available in sets, blocks, rolls, slabs, cut segments, and on shoes, either bonded or riveted.

and all from one source... your WAGNER Jobber



Wagner Lockheed Hydraulic Brake Parts

They cover every make and model of vehicle and include hard-to-find numbers not easily obtainable elsewhere.

Wagner Lockheed Hydraulic Brake Fluid

Chemically balanced to function perfectly under all driving conditions, and in all seasons.

Wagner Electric Corporation
6498 Plymouth Avenue, St. Louis 14, Mo., U. S. A.

Please send me my FREE copy of the new Bulletin HU-411. I understand there is no obligation.

Name_____

Firm Name_____

Address_____ Zone____ State_____

City_____

"For refinishing like this...

use the Flexbac® Method..."

Says **GEORGE KLANECKY,**
Paint Shop Manager
DEAN & HARRIS OF LANSING, Lansing, Michigan

"We refinished this new 1954 Ford for display at Lansing's Automotive and Industrial Exposition," says Mr. Klanecky, "using CARBORUNDUM's FLEXBAC® Pad and RED-I-CUT® Waterproof Papers—as we do on all our refinishing jobs. We find that the FLEXBAC Method of preparation cuts our cost of operation, and lets us turn out *better* work...*faster*. I heartily recommend it to every refinisher."

The FLEXBAC Pad hugs every contour...because of its cushion-type resilient rubber construction. You can sand up to 90% of every autobody with it—cut sanding time as much as 50%, eliminate costly, tiring hand sanding.

FOR A DEMONSTRATION

of the many advantages of this fast, economical refinishing method, call your CARBORUNDUM or jobber salesman. No obligation, of course! Or, if you prefer, write to The Carborundum Company, Dept. MA 90-426, Niagara Falls, N. Y.

use the Flexbac® Method

RED-I-CUT® Waterproof Paper Discs—*long-lived, fast-cutting, non-peeling.*
FLEXBAC® Pad Assembly—*ideal for contours as well as flats.*
FLEXBAC® Masking Tape—*easy-on, holds tight, easy-off.*

the superior autobody products by

CARBORUNDUM

REGISTERED TRADE MARK

90-426

It takes all kinds of customers...

...but they all want the best. And when it's bearings, *just tell 'em it's TIMKEN®!*

To keep customers coming back for service, let them know that your replacement parts are the best. Whenever you install a tapered roller bearing, for instance, point out the trade-mark "Timken®". Customers know it stands for quality and dependability. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN ***TAPERED ROLLER BEARINGS***

TRADE-MARK REG. U. S. PAT. OFF.

NOT JUST A BALL ◯ NOT JUST A ROLLER ▭ THE TIMKEN TAPERED ROLLER ▭ BEARING TAKES RADIAL ◯ AND THRUST →◯← LOADS OR ANY COMBINATION ✳

Every advantage in the book is yours with AC

Factory Equipment on Nearly as Many New Cars and Trucks as All Other Makes Combined — the Industry's Greatest Ready-made Replacement Market!

There is an AC Spark Plug for Every Make and Every Model of Car, Truck and Tractor — also for Inboard, Outboard and All Other Types of Engines

AC is the Only Spark Plug with Thin-Tipped, Self-Cleaning Insulator, the Power-Boosting Fuel-Saving Insulator that Revolutionized Spark Plug Performance

GM GENERAL MOTORS

AC SPARK PLUG DIVISION
GENERAL MOTORS CORPORATION
FLINT, MICHIGAN

"Farmers are 3-way buyers"

says George Hoffman, Secretary and Sales Manager, Harrisburg Auto Parts Company, Harrisburg, Pennsylvania

"SIXTY PER CENT of our sales are rural," says Mr. Hoffman, "so we know farmers are 3-way buyers.

"Because farmers buy our products for their trucks, farm machines and cars, automotive advertising in *Country Gentleman* pays off for us in a big way. It means good business for our dealers—and good business for us."

The experience of this company—the largest automotive jobber in central Pennsylvania, with five branches serving a rich, rural-industrial market—is duplicated in region after region all across America when *Country Gentleman* lends advertising support to rural sales.

Because it's the most effective selling force in this triple market, jobbers and dealers alike are glad to see their lines advertised in *Country Gentleman*.

Farm buying makes **Automotive Advertising 3 times more effective in . . .**

Country Gentleman

A Curtis publication • Circulation now over 2,600,000 The magazine for Better Farming

Chrome Steel Rails

—another reason why

Sealed Power KromeX

Piston Ring Sets deliver the world's best

ALL-AROUND PERFORMANCE FOR THE MOST MILES!

28 MAJOR ENGINE BUILDERS use Sealed Power chrome top rings!

Solid chrome faces on the MD-50 Steel Oil Ring—plus the solid chrome face on the top compression ring—give every KromeX Ring Set the top-and-bottom protection needed to fight heat, friction, abrasion, and corrosion. With top and bottom rings in each set so protected, the in-between rings are also protected—and the whole KromeX set delivers amazingly longer mileage. Factory seating assures fast break-in and immediate oil control. No other piston ring set can match Sealed Power KromeX results!

GET IT FROM YOUR JOBBER

SEALED POWER CORPORATION, MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST IN NEW CARS! BEST IN OLD CARS!

Sealed Power Motor Parts—*The Heart of the Engine* • Rings, Pistons, Pins, Sleeves, Valves, Water Pumps

Newscoop

"I Cover the Autofront" .....by Len Westrate

Makers absorb some cost

Disguised price cuts by car manufacturers in the form of trading allowances, extra bonuses and prizes are the first indication that the manufacturers are starting to absorb some of the cost of selling automobiles at lower prices to the public. Up to now dealers have been taking the brunt in the form of over-allowances on used cars and discounts. The largest allowance we have heard about is $200 offered by Hudson. Other companies have various forms of incentive payments which all wash out to the same thing--unofficial price cut to the dealer which enables him to pass on lower prices to the buyers. However, the manufacturers are saying little about their bonus sales plan.

★ ★ ★

NADA REPORTS THAT SPACE SALES for its equipment exhibit in connection with the annual convention in Chicago next January already are 20 per cent ahead of last year and that half the space is sold. It has 196 exhibit spaces available at the Conrad-Hilton Hotel, the most since the equipment exhibit was instituted.

Kyes back with GM

The wide speculation about the ultimate destination of Roger M. Kyes, who left his position as Deputy Secretary of Defense May 1, ended with the announcement that he would rejoin General Motors Corporation. Mr. Kyes returns to GM in a bigger role than he had when he left the company 18 months ago. In addition to being named group executive in charge of the GMC truck and coach, Dayton, and household appliance divisions, he has been elected to the board of directors for the first time. Previously he had been vice-president and general manager of the GMC truck and coach division.

★ ★ ★

CHEVROLET WILL GO TO 12-VOLT electrical systems across the board next year. This means that both the new V-8 and the in-line Six for 1955 will have 12-volt ignition, making it universal throughout the General Motors passenger car line.

ONE CAR MANUFACTURER IN THE HIGH PRICED FIELD has done a quick switch and is frantically tooling to get a wraparound windshield for 1955 models. Previously it had been planned to stick with its present design and would have been alone had it not decided to jump on the bandwagon.

6-cylinder lines to go

Both DeSoto and Chrysler Divisions are expected to drop their 6-cylinder lines for 1955 models. Popularity of the overhead valve V-8 seems to be running the sixes out of the picture.

★ ★ ★

IT NOW LOOKS AS THOUGH introduction of 1955 models will be earlier than previously expected for at least some companies. The earliest one we have heard about definitely is late October, with others coming between then and mid-January.

Tubeless tires for 1955

Packard is taking the lead in the automobile industry in offering tubeless tires as a standard equipment option. Beginning in July, the company offers a choice between conventional and tubeless tires at no price penalty. Tubeless tires undoubtedly are going to sweep the industry as standard equipment in the next year or two. Tire companies have predicted that several car makers will offer them on 1955 models as a factory installed option or possibly in one or two cases as 100 per cent standard equipment.

★ ★ ★

FOR THE FIRST QUARTER ended March 31, Kaiser Motors Corp. has estimated a net loss of $7.509 million, more than double the loss it suffered in the same period a year earlier. The latest financial report brings the aggregate loss of the company since its incorporation in 1945 to almost $86 million. While sales were not reported for the first quarter, production of Kaiser and Willys cars totaled 5131 units. In the same period last year the company produced 28,607 Kaiser cars alone.

Chevrolet production

Chevrolet, which produced its first car in 1912, turned out its 31 millionth car on June 23 at its Tarrytown, N. Y. plant. It is interesting to note that the vehicle rolled off the assembly lines in less than five months after the thirty millionth unit was produced. This was the shortest interval of time used to put together one million Chevrolets.

★ ★ ★

A MONTHLY RECORD of more than 500 Lincoln and Mercury buyers picked up their new cars directly at the assembly plant during May under the division's factory retail delivery program. Of the total, more than 300 were from California alone. So far this year, 1728 cars have been delivered to buyers under the program started in 1953.

Improved police cars

Installation of a specially developed 160 hp overhead valve Y-block V-8 engine in the Ford interceptor cars used by law enforcement agencies reportedly has improved acceleration nearly 20 per cent over the 1953 models. Other special equipment offered by Ford on the police cars includes heavy duty brakes, clutch and battery, more powerful generators and alternators, heavy duty radiator core and extra cooling fan.

★ ★ ★

SUSPENDED BRAKE AND CLUTCH PEDALS are expected on the Plymouth and Dodge lines next year. We also hear that Chrysler cars will go to the push button latches for the first time in the next new models.

JIM NANCE, PACKARD PRESIDENT, will emerge as strong man of the new Studebaker-Packard Corporation if stockholders approve combining these last two independents at August 17 meetings. Nance will run the company, aided mostly by young, capable executives he has assembled at Packard. Paul Hoffman as board chairman and H. S. Vance as head of the executive committee, will provide a backlog of counsel and advice based on years of experience, leaving management to the Nance team.

More mergers

Combinations of six independent car manufacturers into a "Little 3"—Studebaker-Packard, American Motors, Kaiser-Willys—during the past 15 months is considered only the first round in industry reorganization. Consolidation of American Motors and Studebaker-Packard within the next year or two is considered likely, possibly in conjunction with a supplier company or another non-automotive concern. Willys' commercial business also might come into such a combination.

★ ★ ★

WE HEAR THAT PAINT COMPANIES are promoting use of "3-tone" paint jobs for 1955 model automobiles. Some companies now use a third color for minor accent. Apparently considerably more lavish use of the third color is being advocated.

Chrysler's gas turbine

An interesting fact about Chrysler's gas turbine automobile is that its 120 hp shaft-output turbine provides about the same average tractive effort at the rear wheels as a 160 hp conventional automobile engine. Reason is the difference in torque characteristics. The turbine develops maximum torque at breakaway, the piston engine practically none. As rpm increases, the torque curves reverse for the two types, but the minimum torque of the turbine is greater than the maximum of a piston engine of the same horsepower.

Washington Wire.....by Ray M. Stroupe

Car industry legislation

Political interest in the affairs of the automotive industry continues unabated. Rep. Crumpacker, of Indiana, is pushing his efforts in Congress to authorize an FTC investigation of General Motors and Ford trade practices. Considerable interest also is being shown in company-dealer relationships. Legislation to outlaw "unilateral" franchise agreements which require dealers to accept goods not specifically ordered has been introduced in the house. Also, NADA is sponsoring legislation which will legalize inclusion of antibootlegging clauses in car dealer contracts. It is difficult at the moment to determine just how far efforts to legislate the industry in these areas will go. But, it is certain that in an election year there will be considerable activity in that direction. Most of the threatened legislation stems from action of automobile dealers and has the open or implied sanction of dealer associations. However, some dealers association officials have pointed out to their members the danger of promoting legislative regulation which may have the end result of putting some rather severe restrictions on the dealers themselves.

★ ★ ★

BATTERY ADDITIVE AD-X2 is still a topic for argument. Last month, the Federal Trade Commission denied the producing firm's appeal to dismiss a complaint charging the producer with false advertising. Another appeal and a request for oral hearings were pending at FTC at that time.

"Cost or market" plan

Buried for this session of Congress is the "cost or market" plan wanted by retailers. The plan would have simplified inventory tax accounting by letting the dealer use either cost of an item or the current market value in figuring the tax. Next January, retailers' representatives will seek this plan again.

★ ★ ★

GOVERNMENT CAR BUYERS STUBBED THEIR TOES, Congress is told, when they paid almost $2,600 each for 50 reconditioned trucks. These turned out to have been former federal property, sold as surplus for not more than $110 apiece. Sent abroad for use by U. S. military missions, many of them broke down quickly.

Fight over tax form 720

Businessmen have made gains in the fight over excise tax form 720. Federal tax men are postponing until January 1 the effective date for using this long form. Meanwhile, they will try to put it into different shape to make it acceptable to merchants and manufacturers.

★ ★ ★

AUTO SALESMEN MAY BE OVERLOOKING one group of prospects with enough money for new cars. They're the bankers. In the Capitol, the story is that of thirty bankers who recently called on a Cabinet member just two had been visited by a car salesman this year.

"Rubber tire bill"

Although most opposition is coming from large rubber companies, a proposed 'rubber tire bill' which would limit retail sales exclusively to independent tire dealers is of significance to repair shops, car dealers, service stations and other automotive outlets. Goodyear points out that if the bill should be enacted a large segment of replacement tire business would arbitrarily be taken away from lawful merchandisers and channeled through and for the benefit of their competitors. Goodyear notes that the bill is aimed at company owned stores but says such outlets account for less than 10 per cent of all industry replacement tire sales and the percentage has not increased in the last decade.

★ ★ ★

CAR TUNEUPS WILL BE NEEDED by motorists throughout the nation as a record number of vacationers get ready to travel. American Automobile Association predicts 60 million persons will be taking pleasure trips this season. The country's 46 million autos will be a big factor in these hot weather jaunts.

Anti-bootleg legislation

Legal action that is expected to appreciably reduce bootlegging in Colorado has been taken at the instigation of the state dealer association. Colorado Attorney General Duke W. Dunbar, in an interpretation of the state's automobile dealer license act, ruled that anyone selling three or more cars a year within the state must be licensed as a dealer. Further, he must have an established place of business within the state. The decision strikes at the practice of bringing untitled cars into Colorado from other states and selling them at auction without a license. Members of the Colorado Dealers Association have loudly complained of the resulting unfair competition.

Demonstrator not eligible

Only a genuine "company car," and not a "demonstrator," is eligible for depreciation on an auto dealer's tax return. Internal Revenue Service rules that a car must have been bought and used entirely for business purposes, not demonstrations, to be considered as a company vehicle.

Report to Our Readers

Dealers' outlook

STUDEBAKER and Packard dealers will become kinfolk, if stockholders approve (come August 17) the consolidation of the Packard and Studebaker enterprises. As we know them, Studebaker dealers are a strong and loyal group of merchandisers, sparked by aggressive leadership from the days when Paul G. Hoffman was young and fiercely intent on selling Studebakers.

When faced with bigger and stronger competition, we heard Mr. Hoffman say: "Nobody has a corner on brains!" And, he proved it.

Packard dealers, likewise stack up well as sound operators. Their strong forte is undoubtedly customer loyalty. A priceless ingredient these days.

Both Studebaker and Packard lines will be made available to both dealer networks. This does not necessarily mean that all dealers will handle complete lines of both makes. Some will, however. Selected Packard dealers also will sell Studebaker trucks in some markets.

Salesmanship reborn

SINCLAIR WEEKS, Secretary of Commerce, is a man whose faith in the ability of the American salesman has been renewed.

Since late spring, the Weeks family has been putting mileage on a black 1954 Studebaker Land Cruiser. It's a personal car, not a government vehicle, and long-range selling was an important factor in the Cabinet official's decision to buy it.

Earlier this year, Mr. Weeks was saying he needed a new car, but no one appeared anxious to sell him one. It had been "at least four years," he estimated, since he had heard from an automobile salesman.

Almost immediately, salesmen in all parts of the U. S. began to call and wire him, each of them anxious to have Secretary Weeks buy his make of car. The man who gained the inside track, however, was Paul Hoffman, chairman of the board, Studebaker Corp.

By telephone, Mr. Hoffman convinced Mr. Weeks that a Studebaker would fill his needs. Then Hoffman turned final arrangements, including delivery, over to Washington dealer Lee D. Butler.

"Such aggressive salesmanship," Mr. Weeks says, "if applied everywhere, should have a stimulating effect on the economy."

Good shopkeeping— a profitable venture

NEXT time you want to criticize the little woman about the way she keeps house, think first. Better 'twould be that she take a look at that shop you keep.

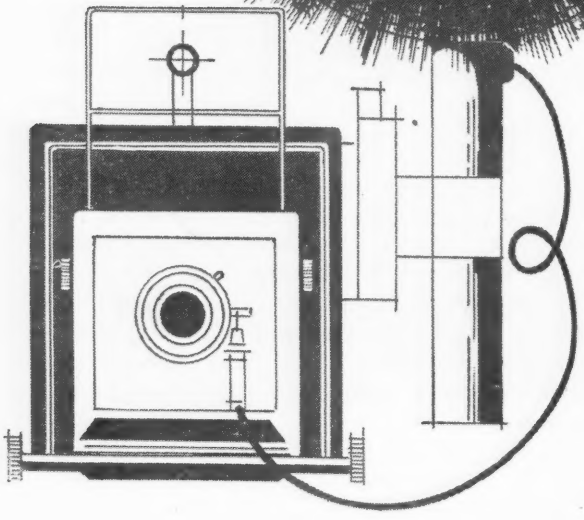
Yet, good shopkeeping is more than cleanliness and neatness. Good shopkeeping includes the kind of a building you operate in, improvements that are required. Lighting, heating, and shop safety are important for good performance of work duties. The right kind of shop equipment and tools and the location and profitable use of such equipment cut costs and make money.

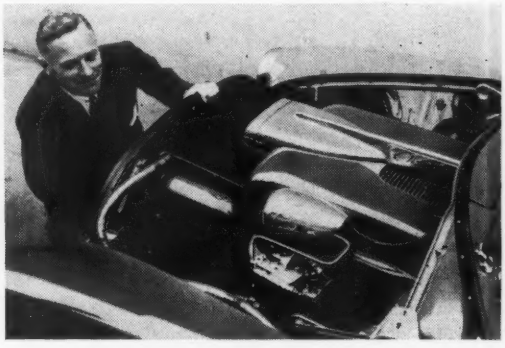
A hoist manufacturer told us of an incident that happened in Haiti. Calling on one of his users down on that island, he discovered that it took fifty-six minutes to raise a car on the hoist. Seeking to detect the trouble he found —sure enough—the air compressor located damnear two and a half blocks away from the hoist. Inefficiency never leads to profits. Good shopkeeping does.

Frank P. Tighe

EDITOR

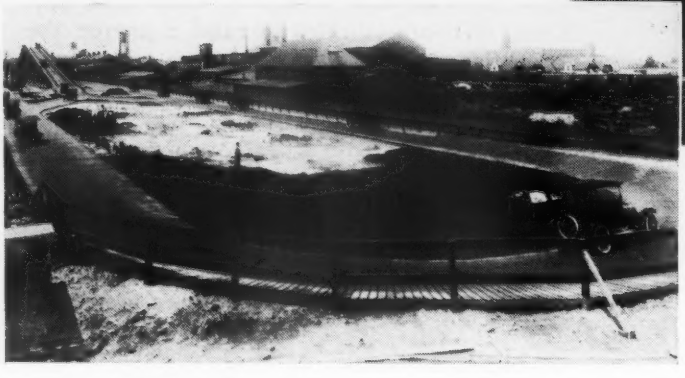
Newscene—





FIRST ACTIVE DEMONSTRATION of Chrysler's experimental gas turbine was made during the Proving Grounds dedication. George J Heubner, Jr. (above) checks over the powerplant prior to the car's news-making run.

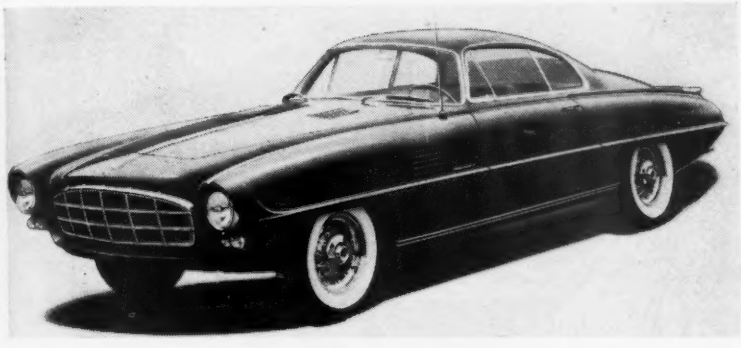
NIGHT AND DAY activity continues on the 4.7 mile concrete oval (left). The five cars shown here are undergoing high speed performance tests as a part of round-the-clock durability runs at the new Proving Grounds.



GO AND STOP testing was about all that could be conducted on this wooden track and incline (shown at the left) built at the Dodge plant almost 40 years ago. It's a far cry from the 4,000 acre Chrysler Engineering Proving Grounds (above) at Chelsea, Mich. Part of the 8.4 mile gravel endurance road encircling the area is shown in the foreground of this aerial view.

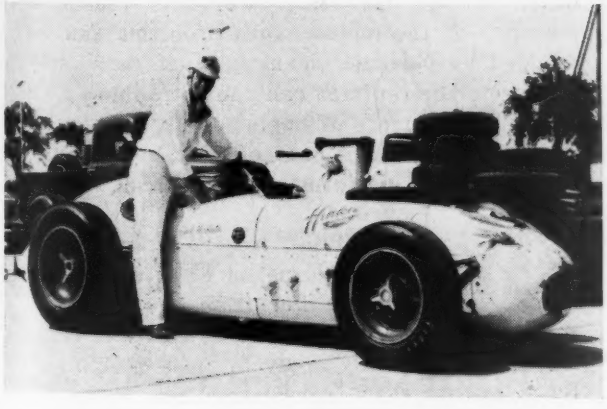
Dramatic demonstrations, new speed records and warm hospitality were the order of the day as Chrysler Corporation dedicated its 4,000 acre proving grounds at Chelsea, Michigan, last month

LOVELY SPEEDSTER Betty Skelton (top left) and Sara Ann Chapin stand at the edge of the high speed oval. Miss Skelton's fame has been mounting rapidly as a speed record holder and exhibition stunt flier.



ON DISPLAY for the first time at the Dedication was the DeSoto Adventurer II (above), a new experimental sports coupe mounted on a standard 125½ inch DeSoto chassis. The body was designed and built by Ghia of Turin, Italy.

A RECORD RUN was recorded by AAA for Betty Skelton (right) after she drove the V-8 powered Dodge Firearrow around the 4.7 mile track at 143.44 mph. This is a women's world speed record. Miss Skelton set a class record of 105.88 mph in a Dodge sedan at Daytona Beach, Fla.



THREE MILES A MINUTE was the record-breaking speed attained by Jack McGrath (left) as he sped around the Proving Grounds oval before newsmen at the dedication. McGrath, who finished third at Indianapolis this year, attained a speed of 179.386 mph. Carefully calculated banks on the turns make these unusual speeds possible.

The Care & Feeding of Shop

"Babying" shop equipment, keeping it clean and servicing it regularly, pays off in minimum time and money lost on repairs

by Ed Janicki

KEEPING shop equipment in good condition and steady operation is about as important to the service shop as maintenance on an automobile is to a motorist. Servicemen should familiarize themselves with the proper methods of taking care of their apparatus to assure a longer and trouble-free life of such equipment. An inoperative unit means lost time and money to the garage.

Many failures of service units—whether it be a lubricating gun, lift, or any one of the electrical devices—can be traced to dirt or other foreign materials. For this reason a majority of the maintenance problems can be avoided by periodic cleaning. Just as a dirty carburetor or radiator can cause trouble on an automobile, a piece of neglected service equipment consequently impedes the performance for which it was meant.

While major maintenance procedures on shop equipment may differ from one manufacturer to another, there are a few simple rules which can generally apply to most equipment. By following them, servicemen can eliminate

Equipment

the many costly maintenance problems caused by carelessness.

LUBRICATING—This is one of the most important service merchandisers in your shop. Since lubricating equipment is in almost constant use, special attention should be given it. Most manufacturers recommend washing exposed surfaces frequently with an approved cleaning compound. Never use gasoline or petroleum solvents to remove oil or grease from plated or baked enamel surfaces. After you are through cleaning the unit, apply a coat of wax to help protect the finish. However, allow at least 30 days for a new baked enamel finish to age properly before the first waxing.

Wipe lubricant delivery hose and air hose clean after each use, as oil and grease deteriorate rubber coverings, and return nozzles of control fixtures to receptacles or hangers provided for them when not in use. Lubrication pumps which continue to operate after the control valves are closed are wearing themselves out and wasting air. A small adjustment or repair may save a more costly overhaul later. Inspect lubricant supply line between pump and outlet for leaks in the line.

If you use overhead lube "reels," avoid jerking them and withdraw only the length of hose required for the job at hand. That way you will keep the hose off the floor and free of contamination. Oil the rollers for hose outlets frequently. Unless the compressor tank is equipped with an automatic water unloader, drain condensation from tank frequently to prevent water from entering the air lines. Before filling a hand gun, apply oil to both the interior and exterior of the open end.

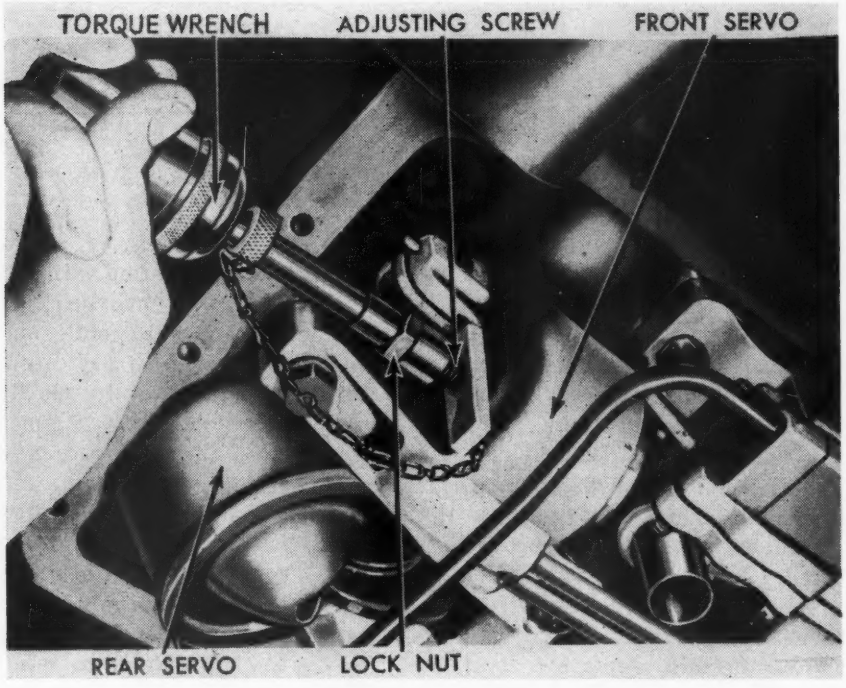
ELECTRICAL EQUIPMENT such as tuneup machines, analyzers and chargers should not be kept in a room where the temperature falls below zero. Moisture due to the condensation which forms when the equipment is warmed up again frequently upsets the operation of the unit until it is thoroughly dried out. In some instances, actual damage can result through forced operation while the components are drenched with moisture, points out one manufacturer of automobile electrical equipment. Certain types of dry disc rectifiers have a pronounced affinity for moisture, and may become short circuited if operated at peak output before they are thoroughly dried out. Moisture also can cause the meters to stick, insulation and condensers to deteriorate.

The life of a power timing lamp will be greatly lengthened if disconnected when not in use, and care should always be exercised to see that electrical units are not connected in reverse polarity. Plastic panels, leads and sockets should always to cleaned with mild soap and water, and corroded terminals wiped off with a solution of baking soda and water. Electrical equipment will give longer, trouble-free service if used regularly.

WHEEL ALINEMENT AND FRAME RACK—The frame rack should always be set square and level and securely anchored to the floor. Check during radius plates to be sure they are clean and free of foreign matter. A tool rack or cabinet should be provided for storage and easy access to miscellaneous tools. If the equipment is basically in good condition but looks weary, a paint job will improve its merchandising appeal.

WHEEL BALANCERS—Bearings, bearing shafts, wiring and motor should be checked after extensive use, and an inventory of balance weights should be taken to determine whether or not the necessary sizes are in stock and should be properly segregated in weight trays or storage cabinet. Cones, adapters and other tools should also be kept clean. Naturally, alinement, frame and balancing equipment maintenance checks depend entirely upon the amount of use the units are getting, the number of people using them and the type of mechanics

(*Continued on page* 96)



View of the transmission after the pan has been removed. Arrows point to the major parts which are referred to in this article.

Quick Service On

Fordomatic and Mercomatic

Band adjustments can be made with regular shop tools plus torque wrench and gage block

by Herman Duchin

FORDOMATIC and Mercomatic band adjustments are relatively simple, using the procedure outlined here. Although special tools facilitate the job, regular shop tools can be used with this method. The proper adjustment will insure longer band life and smoother operation of the transmission, while slipping bands and clutches tend to wear the lining.

The front band should normally be adjusted first. This is done from the underside of the car. Drain the oil from the transmission by removing the oil plug from the transmission oil pan, on early models, and by disconnecting and removing the dip stick filler tube from the right side of the transmission oil pan on later models. About three or four quarts of oil will drain out; the rest of the oil will remain in the torque converter and transmission. Remove the oil pan and gasket from the transmission, then remove the oil screen from the transmission by lowering it off the front and rear oil inlet tubes. With the pan off and the oil screen out of the transmission, locate the front band adjusting lever. Loosen the adjusting screw lock nut a few turns, using a 9/16-inch wrench. Pull the adjusting lever back and insert a gage block between the front servo piston stem and the front adjusting lever. The gage block must be of hard steel material:

(*Continued on page* 152)

"Yes, we do have a cheap paint job— a school boy comes in on Saturdays."

"No I am not going to give you a date tonight to road test the dome light."

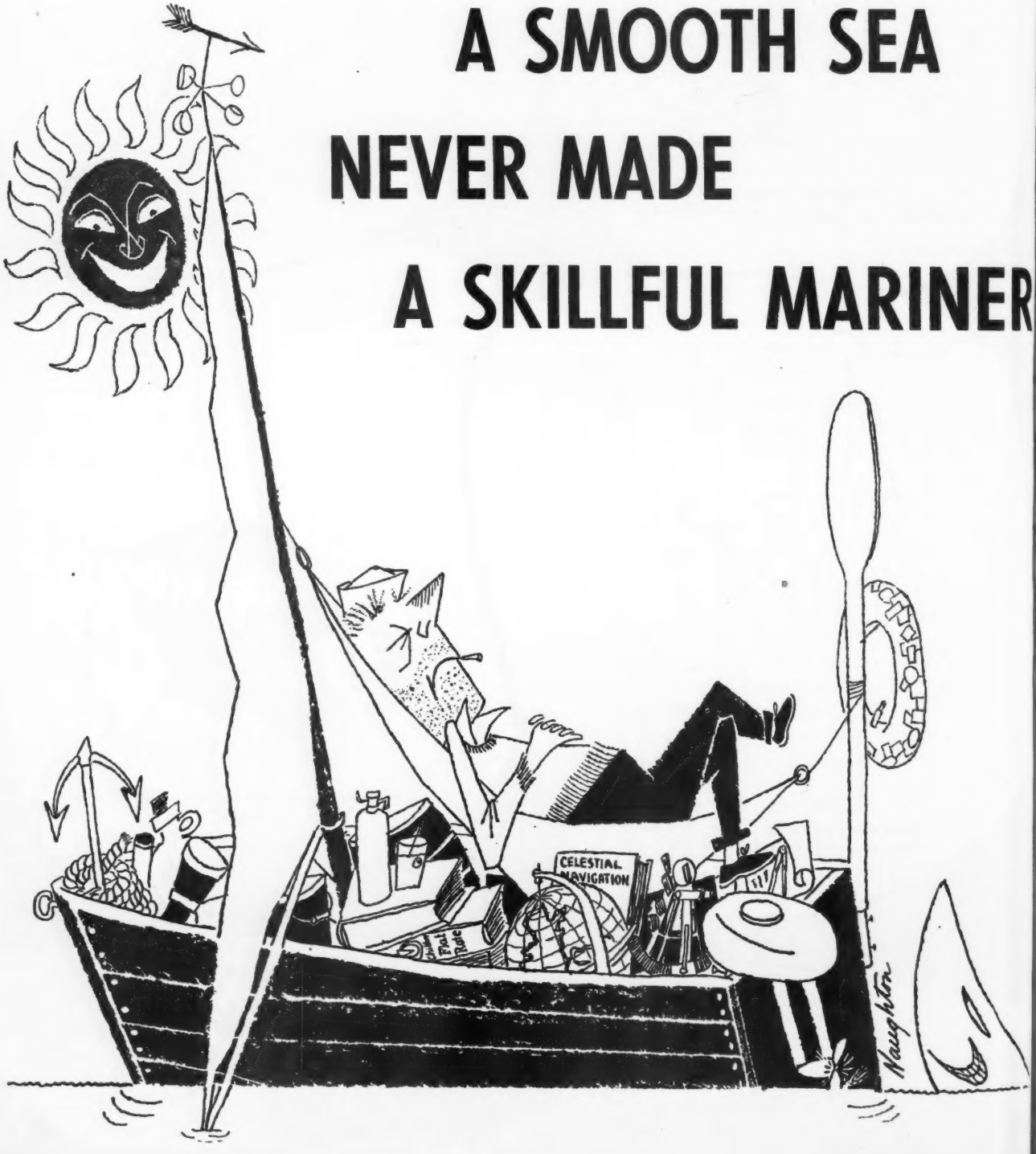
"I get tired of being in the shop all the time, so today I decided to dine out."

"Of course it still rattles, all cars still rattle."

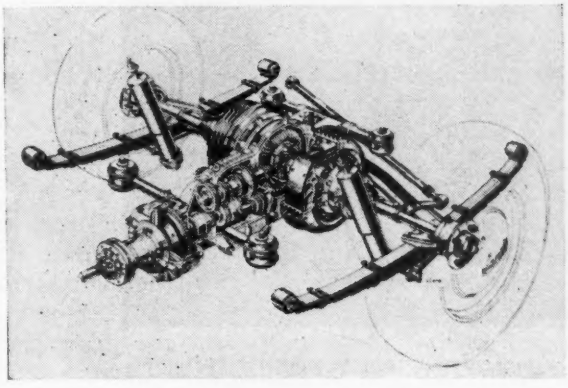
One to Remember

(FOR YOUR BULLETIN BOARD)

A SMOOTH SEA NEVER MADE A SKILLFUL MARINER

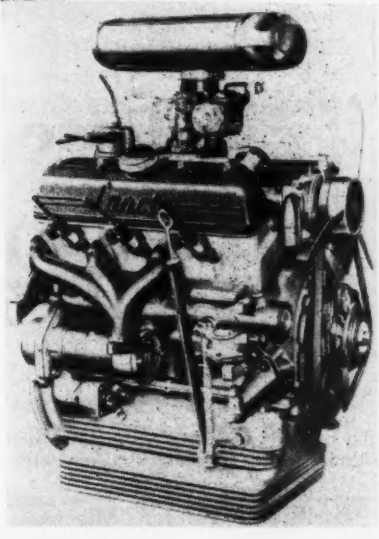


The MOTOR AGE Showroom



Above. The Lancia Aurelia has aluminum fenders, doors and deck lid.

The compact transmission and rear axle assembly are shown at the left.



Above. The Lancia V-6 engine which develops 87 hp at 4300 rpm.

A V-6 Powers

The Lancia Aurelia

Other features of this unusual Italian car are 4-wheel independent suspension and a rear-mounted transmission

THE name of Lancia is an old one in the automotive industry, the company having been founded in 1906. The Lancia car has always been known for its aggressive design, and the latest Lancia Aurelia model holds to this reputation.

The car described in this article does not represent a new model of the Lancia Aurelia, but rather a combination of all the advantages present in the preceding types. Some of the principal advantages claimed by its manufacturer are lightness, speed, low fuel consumption and classic Italian lines. It has 4-wheel independent suspension and an overhead V-6 engine which is of an unusual design.

The clutch and transmission are located in the rear which permits greater freedom of body de-

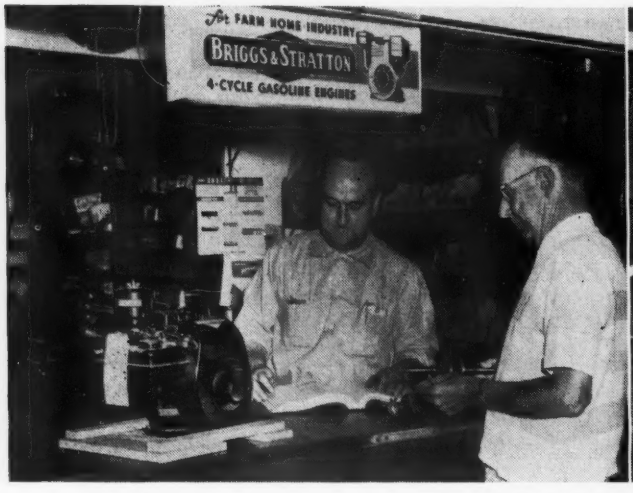
(*Continued on page* 166)

Q. C. "Bud" Herbert explains the features of a new mower to a prospective customer. The showroom floor, seen in the background, is devoted entirely to power mowers and garden tractors during the Spring and Summer seasons.

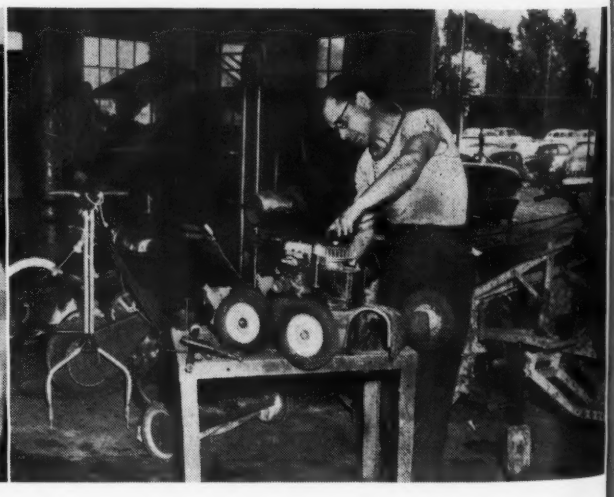
A Case History on

Power Mower Profits

An extra source of income lies in replacement parts, stocked and sold right along with automotive parts.



One corner of the shop is set aside for power mower repairs. They average about three jobs a day.



"Bud" Herbert Motors is one of the many repair shops and car dealers which find power mowers to be a natural and profitable adjunct to their regular automotive business

by Arthur H. Nellen, Jr., Managing Editor

A CASE of the tail wagging the dog developed when Q. C. "Bud" Herbert, of Bud Herbert Motors of Cincinnati, Ohio, decided to sell power mowers as a "sideline" in a corner of his showroom back in 1946. As a used car dealer and independent repair shop operator, Herbert had the facilities to sell and service mowers. Activity became brisk, so he added a line of small garden tractors. It caught on, but fast! Customers waiting for service would become absorbed in the display of small gasoline engine-powered equipment and many a used car sale resulted in a mower or garden tractor sale as well. The word spread, with the help of a little newspaper advertising, and this past spring, Bud Herbert sold 286 units, including garden tractors and power mowers. "Sure it's seasonal," says Bud Herbert, "but this spring my sideline brought in more dollar volume than my used car and repair operations combined! What's more, it's helping to establish a list of satisfied customers, many of whom I expect to see back here for automotive trade."

Herbert's service truck has special ramps to load the larger mowers and garden tractors for delivery.

Herbert's operation is relatively small, with a total of eight employees. When asked whether he went out after "outside" repairs or mowers and tractors—soliciting service on all makes, Herbert explained that he will take this work when it comes in, but does not make an effort to sell service as such. "We can book our work to keep our two mechanics busy through all seasons, but would have to take on additional help in the spring and fall to cope with outside work. We'd rather keep employees and customers happy by continuing our present reputation for dependable service. The idea of taking on extra mechanics for the busy season is somewhat risky, I believe."

Herbert states that they average 20 to 25 repair jobs weekly on garden power equipment.

Although Bud Herbert Motors will continue to be primarily an automotive service center, the power mowers sideline has proved to be most successful and has provided an excellent source of extra income to help retain a showroom on one of Cincinnati's busiest arteries. There are many other repair shops and car dealers throughout the country who could do their communities and themselves a service by offering a complete line of power mowers and garden tractors. It's a rapidly growing industry, what with residential areas moving further and further away from the cities. The trend is toward larger lots, some of them miniature farms, and the suburbanite finds that he cannot afford the time and energy to cut his lawn "by hand." When he wants to buy a power mower or a garden tractor, he must go either to a large chain store or to a specialized mower store, of which there are far too few.

The automotive business is a natural source of new power mower dealers, as they are already set up to service the units they sell, and they usually have space available for display. What's more, they have established their

(*Continued on page* 106)

READERS' TROUBLE

by Jack Montgomery, Technical Editor

- Ford Hard to Start
- Kaiser Creeps When Cold
- No Oil Pressure at Idle
- Increased Chevie Pressure
- Chrysler Vibration Problem
- Dodge Engine Smokes
- Squeaking Truck Brakes
- Vapor Lock on Cadillac

Fords Hard to Start When Hot, Seem Flooded

We have found that in Ford passenger cars and trucks (1951-54) there is trouble with the carburetor, with flooding and with starting. Most starting trouble seems to occur after the motor has been warmed up and the owner makes a short stop. When he tries to start, it acts like the carburetor has been flooded.

F. V. Basler
Stanton Garage
Ste. Genevieve, Mo.

I WOULD suggest resetting the float level on these jobs and checking for excessive fuel pump pressure. Also, make sure the heat damper valve is free and working properly.

Car Creeps When Cold; New Clutch Was Installed

We have a 1949 Kaiser which, when cold, tends to creep forward with the clutch disengaged. A new clutch has been installed, adjustments have been made according to factory specifications, the linkage properly set, and plenty of clearance allowed for the clutch, but it still creeps.

P. R. Mathis
Knight & Mathis Garage, Inc.
Vero Beach, Fla.

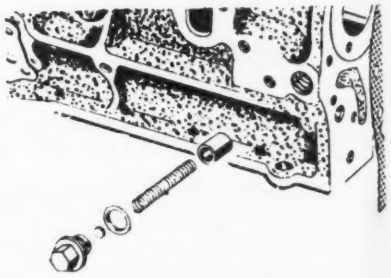
IF you're sure the adjustments are OK and it shifts without the gears clashing, the trouble is possibly due to pilot seizing on the main drive gear. I would suggest removing the transmission to check this bearing. Also, there's the possibility of oil getting on the clutch facing.

No Oil Pressure At Idle

We have a customer with a 1951 Studebaker Champion with 9000 actual miles on the car, and the oil pressure is zero at idle. There are no knocks at speed and a fair oil pressure at 35 mph. We have flushed the motor and checked the relief valve.

Harry Graff
Elizabeth, N. J.

ACTUALLY the oil pressure on this job should register 40 pounds at 30 mph. If it is pumping close to that you have nothing to worry about. To overcome the



zero pressure at idle I would suggest stretching the relief valve plunger spring slightly.

Increasing Compression On Chevrolet

We have a customer who wants to plane the head on his '52 Chevrolet to increase compression; he also wants to install a high lift

SHOOTING PROBLEMS

camshaft. Is this possible and how much can be safely taken off the head?

Cecil Jackson
The Motor Garden
Sardis, Ohio

I WOULD recommend planing .070 inch off it; also the intake valves should be set deeper in the head to prevent them from hitting the pistons. Add shims between the rocker arm brackets equal to the amount removed from the head so that the tappets can be adjusted.

Engine Smokes After Standing Awhile

One of our dealers has a 1953 Dodge V-8 that consumes oil; in running tests it has a clear tail exhaust pipe. After making a run and allowing the car to sit for several hours, the engine belches oil smoke from the tail pipe when started again. Could it be caused by the construction of the overhead valves which cause the lubricating system to load up the valve action with pools of oil which drain into the cylinders via the intake guides?

S. B. Brubaker
Auto Parts Company
Indiana, Pa.

USUALLY when a condition like yours exists it is caused by the engine oil passing down the valve guides. This can be overcome by installing deflectors or baffles on top of the intake valves.

Vibration Problem In 1953 Chrysler

Have you any information regarding a vibrating noise in a 1953 Chrysler Windsor standard shift, at about 28 or 30 mph? Inspection of the clutch assembly, universal joint and drive shaft did not reveal anything.

Ralph Courtemanche
Summer Street Garage
Fitchburg, Mass.

THIS noise could be caused by too much end play between the cluster gears and case or in the clutch release linkage. This condition can be corrected by adding thrust washers as shown.

Can't Stop Squeak in Chevrolet Truck Brakes

We are having trouble with the brakes on a 1949 Chevrolet 1½ ton gas truck. The brakes squeak and although we have had the drums turned, the linings changed, and have put springs around the drums, we can't stop it.

Patton's Service Station
Greeley, Colo.

USUALLY when this trouble exists it can be eliminated by chamfering the lining on the edges and on each corner. Cutting grooves lengthwise in the lining with a hacksaw is also a good remedy. Another one is to use a grinder to grind the lining smooth.

Engine Starves for Gas in Hot Weather

We have a 1949 62 Cadillac which is giving us trouble in hot weather. It seems to develop a vapor lock, lack of gas in the pump and carburetor. Is this common on cars where the fuel pump is mounted on top of the engine? Would an extra fuel filter near the carburetor have anything to do with it? What would you suggest as a remedy?

Drake Hiway Garage
Inverness, Calif.

TO correct this condition I would suggest wrapping the gas line with asbestos from the fuel pump to the carburetor. I have also seen cases where a worn fuel pump push rod was causing the trouble.

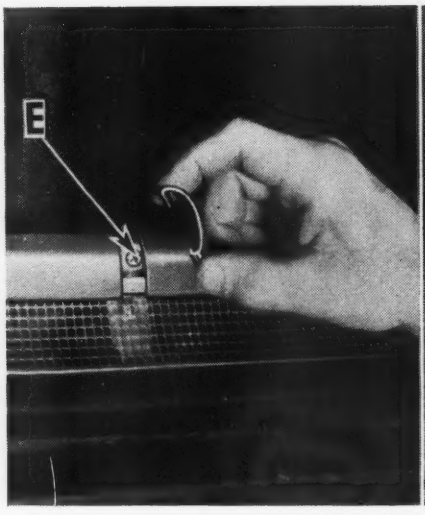


Fig. 2. Another retaining screw is shown at "E," located under the reveal molding center escutcheon.

Fig. 3. Removing the molding from along the bottom edge of the windshield.

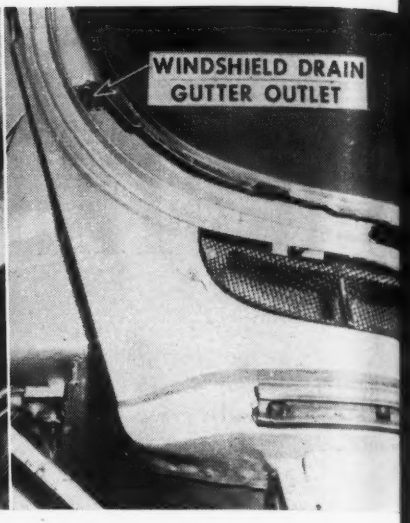
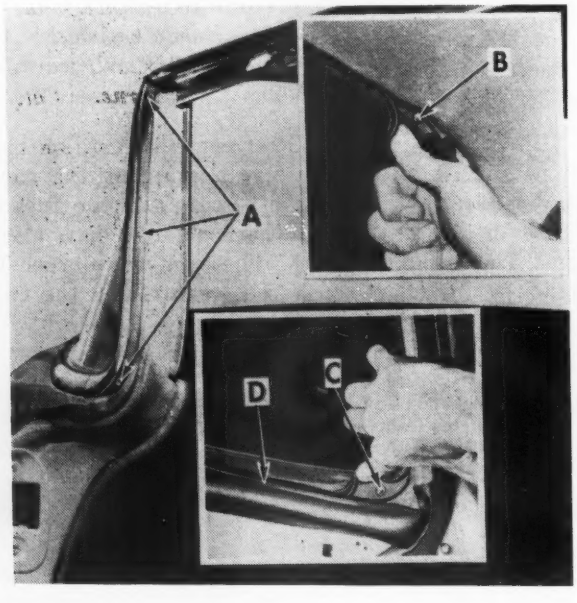


Fig. 4. Be sure the windshield drain gutter and hoses are clear before installation.

Removing and Replacing

GM's Panoramic Windshield

Fig. 1. Reveal moldings are held in place by nuts and screws as shown below.



Here's the easiest way to do the job right

TOPIC of much conversation in body shop circles is the new curved windshield used in the Buicks, Oldsmobiles and Cadillacs, developed in cooperation with General Motors by Libbey-Owens-Ford Glass Co. The method of removing and replacing these windshields is not complicated, as can be seen from the following procedure, although considerable care must be exercised for proper fit.

The procedure outlined here is for the 1954 Buick 40 and 60 series and the 1954 Oldsmobile 88 and 98, two door and four door sedan models.

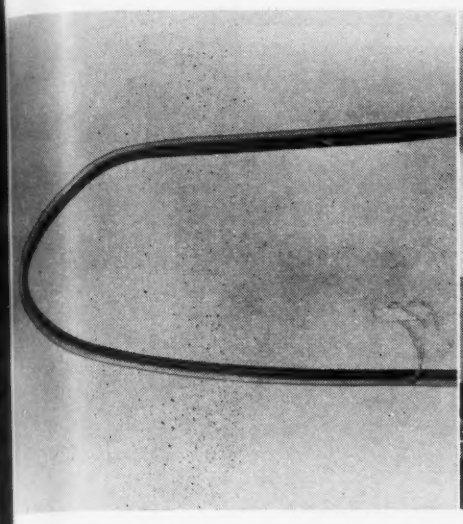


Fig. 5. Insert cord into the cavity of the rubber channel. Secure the ends as shown.

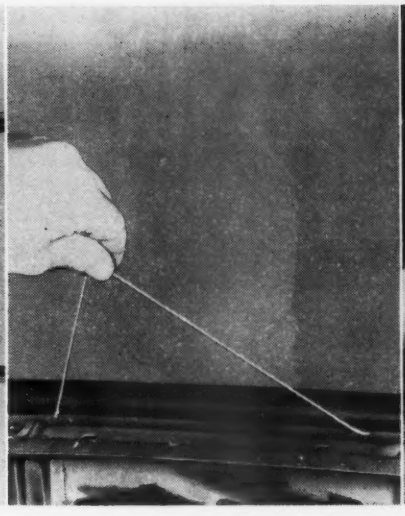
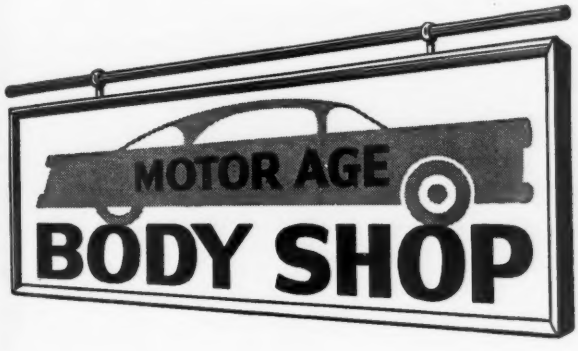


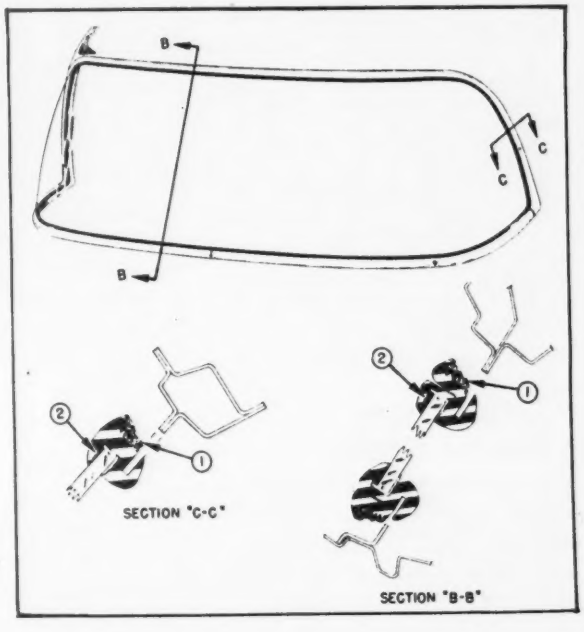
Fig. 7. While pressing in on the glass, pull out the cord. This seals the channel.

Fig. 8. Use weatherstrip cement between the outside lip of the rubber channel and the glass.



on Olds and on the 40 and 60 series Buick

Fig. 6. Before installing windshield, apply sealer to the rubber channel at points "1" and "2" as shown.

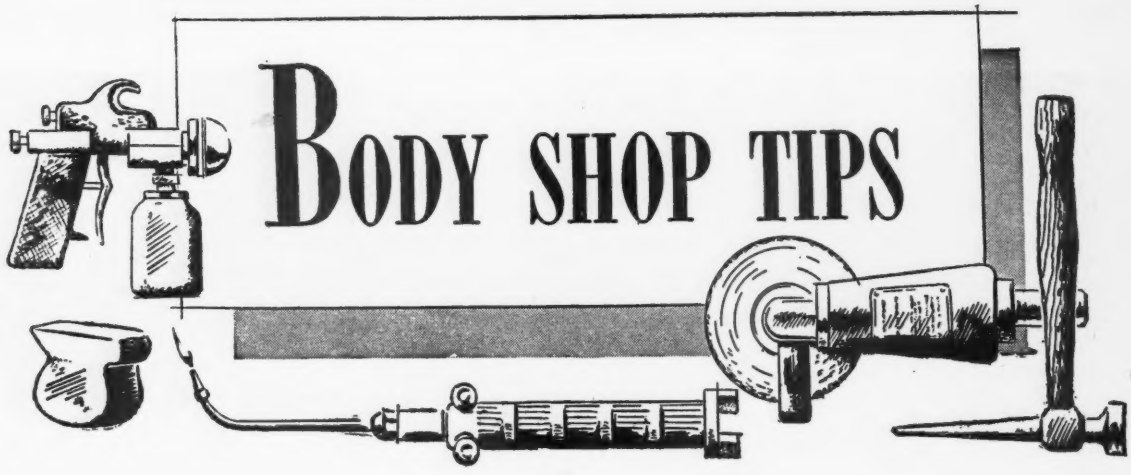


The newly designed windshield reveal moldings and the cowl top ventilator screen are located below the windshield. Another new feature is the windshield drain gutter which is located along the bottom of the windshield on the inside of the body with a drain hose located at each lower corner. The glass is retained in the windshield opening by means of a rubber channel, as on previous models. The procedure for installing and removing the new windshield, however, is different because of the change in design.

Removal

Place protective coverings over the hood, fenders and instrument panel and mask around the outer windshield opening. Remove the wiper blade, arm assembly and windshield garnish moldings, rear view mirror and support assemblies. At the right hand left windshield pillar, remove the windshield side reveal

(*Continued on page* 100)



BODY SHOP TIPS

BODY SHOP TIPS
are worth
$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for $7.50.

Inner Tube Protects Newly Painted Fenders

Here's a tip for replacing bumpers on newly painted cars without scratching the paint on the fenders. Cut two 8-in. sections of an inner tube and slip them over each end of the bumper. This eliminates having to repaint deep scratches in the fender. *R. J. Crowder, 2620 W. 5800-So., Roy, Utah.*

Lacquer Thinner Helps Remove Pieces of Glass

To cut automobile safety glass, take a glass cutter and cut the glass on both sides. Next, break it at the cut edges. Then take an oil can filled with lacquer thinner and squirt the thinner into the cracks of the glass. The excess pieces of glass fall right off. *Tony Prioletet, Tony's Garage. Greensburg, Pa.*

Special Tool to Adjust Fan and Generator Belts

I have developed a tool that makes adjustment of fan and generator belts on 1949 and later model Fords much simpler for me. Here's how it works. Standing in front of the radiator, with the tool in your left hand, slide the short end under the generator and with the "L" shaped part of the tool resting on the engine, lift up. This exerts an even pressure against the generator and allows the mechanic to make a close adjustment. *L. V. Hairston, 125 Comal, Luling, Texas.*

Method to Remove Pop-In Dents

To straighten a door that has a pop-in dent, wet the metal and use a large vacuum cup. Press the cup on tight and give it a quick tug. This will eliminate the need to weld holes or repaint. *Ken Shields, Shields Auto Elec Co., 1601 Truxtun Ave., Bakersfield, Calif.*

Tap with Taped Hammer To Remove Door Upholstery

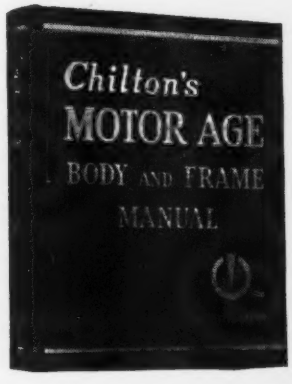
When removing door upholstery, all models held with upholstery nails should be tapped gently along the edge with a tape-covered, flat-faced hammer, resetting the nails and allowing easy removal. *Charles Geyer, Acme Auto Body Works, 36-38 Norfolk St., Newark 4, N. J.*

Solder Holes to Prevent Oil Leaks in Valve Door Covers

To prevent oil leaks in Studebaker Champion valve door covers, drive solder or lead in the tiny holes located at the bottom of the valve chamber opening. This alone reduces 40 pounds of pressure from the gasket, but it hurts nothing. *Cletus Mullins, Mullins Motor Co., Clifton, Ariz.*

Fasten Drip Molding to Top With Screw and Lead Over

To prevent unnecessary welding and preparation for refastening rusted drip moldings, drill an ⅛-in. hole through the molding into the turret top, fasten with a metal screw and lead over. *Charles Geyer, Acme Auto Body Works, 36-38 Norfolk St., Newark 4, N. J.*



Other valuable information of the type presented each month in The BODY SHOP is available in Chilton's Motor Age Body and Frame Manual.

WORK-A-DAY

SPECS

ON ALL 1954 CARS

Up-to-the-minute data, covering all 1954 passenger cars from bumper to bumper, top to tire, are given in the following Readers' Reference Section of Motor Age. Also included are foreign cars, light trucks, wheel-type tractors and small engines. Listed below are the tables and page numbers.

TUNE-UP DATA ON 1949-1954 CARS

MAKE AND MODEL		No. of Cylinders, Bore and Stroke (In.)	VALVES				IGNITION				Crankcase Capacity (Qts.)	Cooling System Capacity (Qts.)	Compression Ratio (Standard Head)	CRANK-PIN		FRONT AXLE			
			Inlet Tappett Clearance for Valve Timing (In.)	Intake Valve Opens Deg. Before or After T.C.	Operating Tappett Clearance (In.)		Spark Plug		Timing					Diameter (In.)	Length (In.)	Caster (Deg.)	Camber (Deg.)	Toe-In (In.)	Kingpin Inclination (Deg.)
					Intake	Exhaust	Make and Model	Gap (In.)	Spark Occurs—No. Deg. Before or After T.C.	Breaker Gap (In.)									
BUICK																			
40	1949	8-3 3/32 x4 1/8	.015	13B	.015H	.015H	AC-48	.025	4B	.015	6½	13	6.30	2	1 7/32	¼P to 1½P	5/8N to 7/8P	1/16 to 1/8	4¼
50	1949	8-3 3/32 x4 1/8	.015	13B	.015H	.015H	AC-48	.025	4B	.015	6½	13	6.60	2	1 7/32	¼P to 1½P	5/8N to 7/8P	1/16 to 1/8	4¼
70	1949	8-3 7/16 x4 5/8	AA	14B	AA	AA	AC-48	.025	6B	.015	8	16¾	6.90	2¼	1 5/16	½P to 1½P	5/8N to 7/8P	1/16 to 1/8	4¼
40	1950	8-3 3/32 x4 1/8	.015	13B	.015H	.015H	AC-48	.025	4B	.015	6½	13	6.60	2	1 7/32	¼P to 1½P	5/8P to 7/8P	1/16 to 1/8	4¼
50	1950	8-3 3/16 x4 1/8	.....	13B	.....	.....	AC-48	.025	4B	.015	6½	13	6.90	2⅛	1 7/32	¼P to 1½P	5/8P to 7/8P	1/16 to 1/8	4¼
70	1950	8-3 7/16 x4 5/8	.....	14B	.....	.....	AC-48	.025	6B	.015	8	17¾	7.20	2¼	1 5/16	¼P to 1½P	5/8N to 7/8P	1/16 to 1/8	4¼
40	1951	8-3 3/16 x4 1/8	.....	13B	.....	.....	AC-46X	.025	4B	.015	6½	12	6.60	2⅛	1 7/32	¼P to 1½P	5/8N to 7/8P	1/16 to 1/8	4¼
50	1951	8-3 3/16 x4 1/8	AA	13B	AA	AA	AC-46X	.025	4B	.015	6½	12	6.90	2⅛	1 7/32	¼P to 1½P	5/8N to 7/8P	1/16 to 1/8	4¼
70	1951	8-3 7/16 x4 5/8	AA	14B	AA	AA	AC-46X	.025	6B	.015	8	18	7.20	2⅛	1 5/16	¼P to 1½P	5/8N to 7/8P	1/16 to 1/8	4¼
40	1952	8-3 3/16 x4 1/8	.004†	13B▲	.015H	.015H	AC-46X	.026	4B	.018	5½	12■	6.60	2⅛	1 7/32	¼P to 1½P	5/8N to 7/8P	1/16 to 1/8	4¼
50	1952	8-3 3/16 x4 1/8	.004†	14B	AA	AA	AC-46X	.026	4B	.018	7	12■	6.90	2⅛	1 7/32	¼P to 1½P	5/8N to 7/8P	1/16 to 1/8	4¼
70	1952	8-3 7/16 x4 5/8	.004†	14B	AA	AA	AC-46X	.026	6B	.018	7	18	7.50	2¼	1 5/16	¼P to 1½P	5/8N to 7/8P	1/16 to 1/8	4¼
40	1953	8-3 3/16 x4 1/8	.004†	13B▲	.015H	.015H	AC-46X	.025	4B	.016	5½	12■	7.00	2⅛	1 7/32	½N to ¾P	5/8N to 7/8P	1/16 to 1/8	4¼
50	1953	8-4x3 1/2	.004†	25B	AA	AA	AC-44-5	.032	5B	.016	6	16½●	8.00	2¼	7/8	½N to ¾P	5/8N to 7/8P	1/16 to 1/8	4¼
70	1953	8-4x3 1/2	.004†	25B	AA	AA	AC-44-5	.032	5B	.016	6	18	8.50	2¼	7/8	½N to ¾P	5/8N to 7/8P	1/16 to 1/8	4¼
40	1954	8-3 5/8 x3 13/16	.004†	25B	AA	AA	AC-44-5	.033	5B	.015	6	16½	7.20	2¼	7/8	¾N to ½P	5/8N to 7/8P	0 to 1/16	0
50, 60	1954	8-4x3 1/2	.004†	25B	AA	AA	AC-44-5	.033	5B	.015	6	16½	8.00	2¼	7/8	¾N to ½P	5/8N to 7/8P	0 to 1/16	0
70	1954	8-4x3 1/2	.004†	25B	AA	AA	AC-44-5	.033	5B	.015	6	18½	8.50	2¼	7/8	¾N to ½P	5/8N to 7/8P	0 to 1/16	0
CADILLAC																			
60, 61, 62, 75	1949	8-3 1/2 x3 5/8	.001	19B	AA	AA	AC-48	.035	5B	.015	5	18	7.50	2¼	2	½N to ½P	¾N to ¾P	1/32 to 3/32	5°51'
60, 61, 62, 75	1950	8-3 1/2 x3 5/8	.001	24B	AA	AA	AC-46-5	.035	5B	.015	5	18	7.50	2¼	2	½N to ½P	¾N to ¾P	1/32 to 3/32	5°51'
60, 61, 62, 75	1951	8-3 1/2 x3 5/8	.001	24B	AA	AA	AC-46-5	.035	5B	.016	5	18	7.50	2¼	2	½N to ½P	¾N to ¾P	1/32 to 3/32	5°51'
60, 62, 75	1952	8-3 1/2 x3 5/8	.....	14B	AA	AA	AC-48	.035	5B	.013	5	19	7.50	2¼	11/16	½N to ½P	¾N to ¾P	1/32 to 3/32	5°51'
60, 62, 75	1953	8-3 1/2 x3 5/8	.....	22B	AA	AA	AC-46-5	.035	2 1/8B	.013	5	19¾	8.25	2¼	11/16	½N to ½P	⅜N to ⅝P	1/16 to 1/8	5°51'
60, 62, 75	1954	8-3 1/2 x3 5/8	.....	22B	AA	AA	AC-46-5	.035	.....	.019	5	19¾	8.25	2¼	11/16	0 to 1N	⅜N to ⅝P	1/16 to 1/4	5°51'
CHEVROLET																			
GJ, GK	1949	6-3 1/2 x3 3/4	.008H	1B	.006H	.013H	AC-46-5	.035	5B	.021	5½	16	6.60	2 3/8	1 7/16	0 to 1P	0 to 1P	0 to 1/4	4
HJ, HK	1950	6-3 1/2 x3 3/4	.006H	1B	.006H	.013H	AC-46-5	.035	5B	.021	5½	15	6.60	2 3/8	1 7/16	0 to 1P	0 to 1P	0 to 1/4	4
JJ, JK	1951	6-3 1/2 x3 3/4	.....	1B	.006H	.013H	AC-46-5	.035	5B	.021	5½	15	6.60	2 3/8	1 7/16	0 to 1P	0 to 1P	0 to 1/4	4
2100*	1951	6-3 9/16 x3 1/8	AA	16B	AA	AA	AC-46-5	.035	5B	.021	5½	15	6.70	2 3/8	1 7/16	0 to 1P	0 to 1P	0 to 1/8	4
1500	1952	6-3 1/2 x3 3/4	.....	1B	.006H	.013H	AC-46-5	.035	5B	.018	5	15	6.60	2 3/8	1 11/64	0 to 1P	0 to 1P	0 to 1/8	4
2100*	1952	6-3 9/16 x3 1/8	.....	16B	AA	AA	AC-46-5	.035	5B	.018	5	15	6.70	2 3/8	1 11/64	0 to 1P	0 to 1P	0 to 1/8	4
1500	1953	6-3 9/16 x3 1/8	.....	1A	.006H	.013H	AC-44-5	.036	5B	.015	5	15	7.10	2 3/8	1 11/64	0 to 1P	0 to 1P	0 to 1/8	4
2100*, 2400*	1953	6-3 9/16 x3 1/8	.....	16B	AA	AA	AC-44-5	.036	5B	.015	5	15	7.50	2 3/8	2	0 to 1P	0 to 1P	0 to 1/8	4
1500, 2100, 2400	1954	6-3 9/16 x3 1/8	.....	1A▲	.010H‡	.020H‡	AC-44-5	.036	2A	.015	5	16	7.50	2 3/8	1	0 to 1P	0 to 1P	1/16 to 3/16	4
2900	1954	6-3 9/16 x3 1/8	.....	19½B	.010H	.020H	AC-44-5	.036	2A	.016	5	17¾	8.00	2 1/8	1	0 to 1P	0 to 1P	0 to 1/8	4
CHRYSLER																			
C45	1949	6-3 7/16 x4 1/2	.014	1B	.006H	.013H	AL-	.038	4A	.020	5½	17	7.00	2 1/8	1 7/32	1N to 1P	1N to 3N	0 to 1/16	5½
C46, C47	1949	8-3 1/4 x4 7/8	.011	12B	.008H	.010H	.....	.038	2A	.020	....	21	7.25	2 1/16	1 1/4	1N to 1P	1N to 3N	0 to 1/16	5½
C48	1950	6-3 7/16 x4 1/2	.014	12B	.008H	.010H	AL-AR5	.035	TC	.020	....	17	7.00	2 1/8	1 7/32	1N to 3N	0 to ¾P	0 to 1/16	5½
C49, C50	1950	8-3 1/4 x4 7/8	.011	12B	.008H	.010H	AL-AR5	.035	TC	.018	....	21	7.25	2 1/16	1 1/4	1N to 3N	0 to ¾P	0 to 1/16	7
C51	1951	6-3 7/16 x4 1/2	.014	12B	.008H	.010H	AL-AR8	.035	2B	.020	5	15	7.00	2 1/8	1 7/32	1N to 3N	⅜N to ⅝P	0 to 1/16	5¼
C52, C53, C54	1951	8-3 1/4 x3 5/8	AA	15B	AA	AA	AL-AAR6	.035	TC	.016	5	25	7.50	2¼	2	1N to 3N	⅜N to ⅝P	0 to 1/16	7¼
C51	1952	6-3 7/16 x4 3/4	.014C	12B	.008H	.010H	AL-AR8	.035	2B	.019	5	15	7.00	2 1/8	1 11/64	1N to 3N	⅜N to ⅝P	0 to 1/16	5¼
C52, C53, C54, C55	1952	8-3 1/2 x3 5/8	VTS	15B	AA	AA	AL-4S-140	.035	4B	.017	5	25	7.50	2¼	7/8	1N to 3N	⅜N to ⅝P	0 to 1/16	7¼
C56, C58, C59	1953	8-3 1/2 x3 5/8	VTS	15B	AA	AA	AL-4S-140	.035	4B	.017	5	25	7.50	2¼	7/8	1N to 3N	⅜N to ⅝P	0 to 1/16	7¼
C60	1953	6-3 9/16 x4 3/4	.014	12B	.008H	.010H	AL-AR8	.035	TC	.019	5	15	7.00	2 1/8	1 1/16	1N to 3N	⅜N to ⅝P	0 to 1/16	5¼
C62	1954	6-3 7/16 x4 3/4	.014	12B	.008H	.010H	AL-4S-140	.035	TC	.019	5	15	7.00	2 1/8	1 1/16	1N to 3N	⅜N to ⅝P	0 to 1/16	5¼
C63, C64, C66	1954	8-3 1/16 x3 5/8	VTS	15B	AA	AA	AL-4GS-150	.035	4B	.017	5	25	7.50	2¼	7/8	1N to 3N	⅜N to ⅝P	0 to 1/16	7¼
CROSLEY																			
CD	1949	4-2 1/16 x2 1/4	.....	5B	.005C	.007C	AL-AN7E	.025	8B	.020	2¾	4	7.80	1 3/8	7/8	7½P	2P	3/64 to 1/16	6½
CD	1950	4-2 1/16 x2 1/4	.....	5B	.005C	.008C	AL-AN7E	.025	2B	.020	2¾	4	8.00	1 3/8	7/8	7½P	2P	3/64 to 1/16	6½
CD, VC	1951	4-2 1/16 x2 1/4	.....	5B	.005C	.008C	Ch-J-8	.025	12B	.020	2¾	4	8.00	1 3/8	7/8	7½P	2P	3/64 to 1/16	6½
CD	1952	4-2 1/16 x2 1/4	.005	5B	.005C	.008C	AL-AN7E	.025	12B	.020	2	4	8.00	1 3/8	7/8	7½P	2P	3/64 to 1/16	6½
VC	1952	4-2 1/16 x2 1/4	.005	5B	.005C	.008C	AL-AN7E	.025	12B	.020	2	4	8.00	1 3/8	7/8	7½P	2P	1/64 to 1/16	8½
DE SOTO																			
S13	1949	6-3 7/16 x4 1/4	.014C	12B	.008H	.010H	AL-	.038	4A	.020	....	17	7.00	2 1/8	1 7/32	1N to 1P	0 to ¾P	0 to 1/16	5½
S14	1950	6-3 7/16 x4 1/4	.014C	12B	.008H	.010H	AL-AR5	.035	TC	.019	....	17	7.00	2 1/8	1 7/32	1N to 3N	0 to ¾P	0 to 1/16	5½
S15	1951	6-3 7/16 x4 1/2	.014	12B	.008H	.010H	AL-AR8	.035	2B	.020	5	15	7.00	2 1/8	1 7/32	1N to 3N	⅜N to ⅝P	0 to 1/16	5¼
S15	1952	6-3 7/16 x4 1/2	.014	12B	.008H	.010H	AL-AR8	.035	2B	.020	5	15	7.00	2 1/8	1 11/64	1N to 3N	⅜N to ⅝P	0 to 1/16	5¼
S17	1952	8-3 5/8 x3 11/16	VTS	12B	AA	AA	AL-4S-140	.035	4B	.017	5	22	7.10	2 1/16	13/16	1N to 3N	⅜N to ⅝P	0 to 1/16	5¼
S16	1953	8-3 5/8 x3 11/16	VTS	12B	AA	AA	AL-4S-140	.035	4B	.017	5	22	7.10	2 1/16	13/16	1N to 3N	⅜N to ⅝P	0 to 1/16	5¼
S18	1953	6-3 7/16 x4 1/2	.014	12B	.008H	.008H	AL-AR8	.035	2B	.019	5	15	7.00	2 1/8	1 11/64	1N to 3N	⅜N to ⅝P	0 to 1/16	5¼
S19	1954	8-3 5/8 x3 11/16	VTS	12B	AA	AA	AL-4S-140	.035	4B	.017	5	22	7.50	2 1/16	13/16	1N to 3N	⅜N to ⅝P	0 to 1/16	5½
S20	1954	6-3 7/16 x4 1/2	.014	12B	.008H	.010H	AL-4S-140	.035	2B	.019	5	15	7.00	2 1/8	1 11/16	1N to 3N	⅜N to ⅝P	0 to 1/16	5½
DODGE																			
D29, D30	1949	6-3 1/16 x4 5/8	.014C	8B	.008H	.010H	AL-A5R	.038	2A	.020	....	15	7.00	2 1/16	1	1N to 1P	0 to ¾P	0 to 1/16	5½
D33, D34	1950	6-3 1/4 x4 5/8	.014	8B	.008H	.010H	AL-AR5	.035	TC	.020	....	15	7.00	2 1/16	1	1N to 1P	0 to ¾P	0 to 1/16	5½
D41, D42	1951	6-3 1/4 x4 5/8	.014	8B	.008H	.010H	AL-AR8	.035	2B	.020	5	14	7.00	2 1/16	1 1/4	0	⅜N to ⅝P	0 to 1/16	5¼
D41, D42	1952	6-3 1/4 x4 5/8	.014	8B	.008H	.010H	AL-AR8	.035	2B	.020	5	14	7.00	2 1/16	1 5/16	1N to 1P	⅜N to ⅝P	0 to 1/16	5¼
D44, D18	1953	8-3 7/16 x3 1/4	VTS	9B	AA	AA	AL-4S-140	.035	4B	.017	5	20	7.10	1 13/16	1 1/16	1N to 1P	⅜N to ⅝P	0 to 1/16	5¼
D46, D47	1953	6-3 1/4 x4 5/8	.014	7B	.010H	.010H	AL-AR8	.035	2B	.020	5	15	7.00	2 1/16	1 5/16	1N to 1P	⅜N to ⅝P	0 to 1/16	5¼
D50-1	1954	8-3 7/16 x3 1/4	VTS	17B	AA	AA	AL-4S-140	.035	4B	.017	5	20	7.10**	1 13/16	1 1/16	1N to 1P	⅜N to ⅝P	0 to 1/16	5¼
D50-2, D53	1954	8-3 7/16 x3 1/4	VTS	17B	AA	AA	AL-4S-140	.035	4B	.017	5	20	7.50	1 13/16	1 1/16	1N to 1P	⅜N to ⅝P	0 to 1/16	5¼
D51, D52	1954	6-3 1/4 x4 5/8	.014	12B	.010H	.010H	AL-4S-140	.035	2B	.020	5	15	7.25	2 1/16	1 1/16	1N to 1P	⅜N to ⅝P	0 to 1/16	5¼
FORD																			
98HA	1949	6-3 5/8 x4 13/16	.015	11B	.010C	.014C	Ch-H-10	.030	TC	.025	5	17¼	6.80	2 1/16	1 13/32	¾N to ¼P	¼N to ¾P	1/16 to 1/8	5½
98BA	1949	8-3 5/8 x3 3/4	.015	10B	.011	.015	Ch-H-10	.030	2B	.015	5	22	6.80	2 1/16	1 3/4	¾N to ¼P	¼N to ¾P	1/16 to 1/8	5½
OHA	1950	6-3 5/8 x4 13/16	.015	11B	.010C	.014C	Ch-H-10	.030	TC	.025	5	16	6.80	2 1/16	1 13/32	1N to 1P	0 to 1P	1/16 to 1/8	5¼
OBA	1950	8-3 5/8 x3 3/4	.018††	5B	.014	.018	Ch-H-10	.030	2B	.015	5	21	6.80	2 1/16	1 3/4	1N to 1P	0 to 1P	1/16 to 1/8	5¼
1HA	1951	6-3 5/8 x4 13/16	.014	11B	.014C	.018C	Ch-H-10	.031	TC	.025	5	17¼	6.80	2 1/16	1 13/32	1N to 1P	0 to 1P	1/16 to 1/8	5¼
1BA	1951	8-3 5/8 x3 3/4	.014	5B	.014C	.018C	Ch-H-10	.031	2B	.015	5	22	6.80	2 1/16	1 3/4	1N to 1P	0 to 1P	1/16 to 1/8	5¼
6	1952	6-3 5/8 x3 29/32	.013	18B	.015H	.015H	Ch-H-10	.036	TC	.025	4	15	7.00	2 1/16	1	1N to 1P	0 to 1P	1/16 to 1/8	5
V8	1952-53	8-3 5/8 x3 3/4	.018††	5B	.014C	.018C	Ch-H-10	.031	2B	.015	4	22	7.20	2 1/16	¾	1N to 1P	0 to 1P	1/16 to 1/8	5
6	1953	6-3 5/8 x3 29/32	.013	13B	.015H	.015H	Ch-H-10	.036	TC	.025	4	15	7.00	2 1/16	1	1N to 1P	0 to 1P	1/16 to 1/8	5
6	1954	6-3 5/8 x3 29/32	.013	13B	.015H	.019H	Ch-H-10	.035	3B	.025	4	15	7.20	2 1/16	1	0 to 1P	0 to 1P	1/16 to 1/8	7°6'
V8	1954	8-3 1/2 x3 7/64	.015††	8B	.019H	.019H	Ch-H-10	.035	6B	.015	5	20	7.20	2 1/16	23/32	0 to 1P	0 to 1P	1/16 to 1/8	7°6'

TUNE-UP DATA ON 1949-1954 CARS

MAKE AND MODEL		No. of Cylinders, Bore and Stroke (In.)	VALVES				IGNITION				Crankcase Capacity (Qts.)	Cooling System Capacity (Qts.)	Compression Ratio (Standard Head)	CRANK-PIN		FRONT AXLE			
			Inlet Tappett Clearance for Valve Timing (In.)	Intake Valve Opens Deg. Before or After T.C.	Operating Tappett Clearance (In.)		Spark Plug		Timing					Diameter (In.)	Length (In.)	Caster (Deg.)	Camber (Deg.)	Toe-In (In.)	Kingpin Inclination (Deg.)
					Intake	Exhaust	Make and Model	Gap (In.)	Spark Occurs — No. Deg. Before or After T.C.	Breaker Gap (In.)									
FRAZER																			
495, 496	1949	6-3 1/8 x4 3/8	.014	10B	.014C	.014C	AL-A5	.032	4B	.020	5 1/2	13 1/2	7.30	2 1/16	1 5/8	1N to 1P	0 to 3/4N	0 to 1/16	5 1/4
1951	1950	6-3 1/8 x4 3/8	.014	10B	.014	.014	AL-A5	.032	4B	.020	5 1/2	13 1/2	7.30	2 1/16	1 1/8	1N to 1P	0 to 3/4N	0 to 1/16	5 1/4
515, 516	1951	6-3 1/8 x4 3/8	.014	10B	.014C	.014C	AL-A5G	.032	4B	.020	5 1/2	13	7.30	2 1/16	1 1/8	1N to 1P	0 to 3/4P	0 to 1/16	5 1/4
HENRY J																			
513	1951	4-3 1/8 x4 3/8	.020	9B	.016	.016	AL-AN7	.030	TC	.020	4	10 3/4	7.00	1 15/16	1 5/8	1N to 1P	1/4P to 1P	3/16 to 1/4	4 1/2
514	1951	6-3 1/8 x3 1/2	.020	5B	.016	.016	AL-AN7	.030	TC	.020	5	9	7.00	1 15/16	1 1/8	1N to 1P	1/4P to 1P	3/16 to 1/4	4 1/2
513	1952	4-3 1/8 x4 3/8	.020	9B	.016	.016	AL-AN7	.030	.....	.....	4	.....	7.00	1 13/16	1 5/8	1N to 1P	1/4P to 1P	3/16 to 1/4	4 1/2
514	1952	6-3 1/8 x3 1/2	.020	5B	.016	.016	AL-AN7	.030	.....	.....	5	.....	7.00	1 13/16	1 1/8	1N to 1P	1/4P to 1P	3/16 to 1/4	4 1/2
533	1953	4-3 1/8 x4 3/8	.020	9B	.016C	.016C	AL-A7	.030	5B	.022	4	10 3/4	7.00	1 15/16	1 33/32	1N to 1P	1/4P to 1P	3/16 to 1/4	4 1/2
534	1953	6-3 1/8 x3 1/2	.020	5B	.016C	.016C	AL-A7	.030	TC	.022	5	9 1/2	7.00	1 7/8	1 33/32	1N to 1P	1/4P to 1P	3/16 to 1/4	4 1/2
543	1954	4-3 1/8 x4 3/8	.020	9B	.016C	.016C	AL-A7	.030	5B	.022	4	10 3/4	7.00	1 13/16	1 33/32	1N to 1P	1/4P to 1P	3/16 to 1/4	4 1/2
544	1954	6-3 1/8 x3 1/2	.020	5B	.016C	.016C	AL-A7	.030	5B	.022	5	9 1/2	7.00	1 7/8	1 49/64	1N to 1P	1/4P to 1P	3/16 to 1/4	4 1/2
HUDSON																			
491, 492	1949	6-3 5/8 x4 3/8	.....	7 1/4B	.010H	.012H	Ch-J-7	.038	TC	.020	7 1/2	18	6.50	2 1/16	1 5/8	1/4N to 1/4P	1/4P to 3/4P	0 to 1/16	3°36′
493, 494	1949	8-3x4 1/2	.....	10 5/8B	.006H	.008H	Ch-H-10	.038	TC	.017	8	18	6.50	1 13/16	1 5/8	1/4N to 1/4P	1/4P to 3/4P	0 to 1/16	3°36′
500	1950	6-3 5/8 x3 7/16	.....	7 1/4B	.008H	.010H	Ch-J-7	.032	TC	.020	7 1/2	18 1/2	6.70	2 1/16	1 5/8	1/2P to 1 1/16P	1/4P to 1 1/16P	0 to 1/16	3°36′
501, 502	1950	6-3 1/8 x4 3/8	.....	7 1/4B	.008H	.010H	Ch-H-8	.038	TC	.020	7 1/2	19	6.70	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3°16′
503, 504	1950	8-3x4 1/2	.....	10 5/8B	.008H	.010H	Ch-H-8	.038	TC	.017	8	18	6.70	1 13/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3°36′
4A	1951	6-3 1/8 x3 7/16	.....	7 1/4B	.008H	.010H	Ch-H-8	.032	TC	.020	7 1/2	18 1/2	6.70	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3°36′
5A, 6A	1951	6-3 1/8 x4 3/8	.....	7 1/4B	.008H	.010H	Ch-H-8	.032	TC	.020	7 1/2	18 1/2	6.70	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3°36′
7A	1951	6-3 1/8 x4 1/2	.....	7 1/4B	.008H	.010H	Ch-H-8	.032	TC	.020	7 1/2	18 1/2	7.20	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3°36′
8A	1951	8-3x4 1/2	.....	10 5/8B	.008H	.010H	Ch-H-8	.032	TC	.017	8	18 1/2	6.70	1 13/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3°36′
4B	1952	6-3 1/8 x3 7/16	.008	27B	.008H	.010H	Ch-H-8	.032	TC	.020	7	18 1/2	6.70	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3°36′
5B, 6B	1952	6-3 1/8 x4 3/8	.008	27B	.008H	.010H	Ch-H-8	.032	TC	.020	7	18 1/2	6.70	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3°36′
7B	1952	6-3 1/8 x4 1/2	.008	27B	.008H	.010H	Ch-H-11	.032	TC	.020	7	18 1/2	7.20	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3°36′
8B	1952	8-3x4 1/2	.008	10 5/8B	.008H	.010H	Ch-H-8	.032	TC	.017	7	18 1/2	6.70	1 13/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3°36′
4C	1953	6-3 1/8 x3 7/16	.008	26 3/4B	.008H	.010H	Ch-H-8	.032	TC	.020	7	18 1/2	6.70	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3 1/2
5C	1953	6-3 1/8 x4 3/8	.008	26 3/4B	.008H	.010H	Ch-H-8	.032	TC	.020	7	18 1/2	6.70	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3 1/2
7C	1953	6-3 1/8 x4 1/2	.008	26 3/4B	.008H	.010H	Ch-H-11	.032	TC	.020	7	18 1/2	7.20	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3 1/2
1D, 2D, 3D	1954	6-3x4 3/4	.010	26 3/4B	.010H	.012H	Ch-H-10	.032	TC	.020	5	15	7.50	1 13/16	1 33/32	1/2P to 1 1/16P	1/4P to 1 1/4P	0 to 1/16	4 1/16
4D	1954	6-3 1/8 x3 7/16	.008	33 3/4B	.008H	.010H	Ch-H-10	.032	TC	.020	7	18 1/2	7.00	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3 1/2
5D	1954	6-3 1/8 x4 3/8	.008	33 3/4B	.008H	.010H	Ch-H-10	.032	TC	.020	7	18 1/2	7.00	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3 1/2
7D	1954	6-3 1/8 x4 1/2	.008	33 3/4B	.008H	.010H	Ch-H-11	.032	TC	.020	7	18 1/2	7.50	2 1/16	1 5/8	1/2P to 1 1/16P	1/2P to 1 1/16P	0 to 1/16	3 1/2
KAISER																			
491, 492	1949	6-3 1/8 x4 3/8	.014	10B	.014H	.014H	AL-A5	.032	4B	.020	5 1/2	13 1/2	7.30	2 1/16	1 1/16	1N to 1P	0 to 3/4N	0 to 1/16	5 1/4
491, 492	1950	6-3 1/8 x4 3/8	.014	10B	.014	.014	AL-A5	.032	4B	.020	5 1/2	13 1/2	7.30	2 1/16	1 1/16	1N to 1P	0 to 3/4N	0 to 1/16	5 1/4
511, 512	1951	6-3 1/8 x4 3/8	.014	10B	.014C	.014C	AL-A5	.032	4B	.020	5 1/2	13 1/2	7.30	2 1/16	1 1/16				
511, 512	1952	6-3 1/8 x4 3/8	.014	10B	.014C	.014C	AL-A5	.032	.....	.....	5 1/2	13 1/2	7.30	2 1/16	1 1/16				
531, 532	1953	6-3 1/8 x4 3/8	.018	10B	.014C	.014C	AL-A7	.030	4B	.022	5	12 1/2	7.30	2 1/16	1 1/16	1N to 1P	0 to 3/4P	1/16 to 1/8	5 1/4
542	1954	6-3 1/8 x4 3/8	.018	10B	.014C	.014C	AL-A7	.030	4B	.016	5	12 1/2	7.30	2 1/16	1 1/16	1N to 1P	0 to 3/4P	1/16 to 1/8	5 1/4
545	1954	6-3 1/8 x4 3/8	.018	10B	.014C	.014C	AL-A7	.030	4B	.022	5	12 1/2	7.30	2 1/16	1 1/16	1N to 1P	0 to 3/4P	1/16 to 1/8	5 1/4
LINCOLN																			
9EL, 9EH	1949	8-3 1/16 x4 3/8	.....	14B	AA	AA	Ch-H-10	.030	4B	.016	6	34 1/2	7.00	2 13/32	2 1/4	1/2N to 1/2P	0 to 3/4P	3/32 to 5/32	5
0EL, 0EH	1950	8-3 1/16 x4 3/8	.006	5B	.....	.....	Ch-H-10	.025	4B	.015	6	33	7.00	2 13/32	2 1/4	0 to 1 1/2N	0 to 3/4P	3/32 to 5/32	5
1EL, 1EH	1951	8-3 1/16 x4 3/8	.006	5B	AA	AA	Ch-H-10	.031	4B	.015	6 1/2	34 1/2	7.00	2 13/32	2 1/4	0 to 1 1/2N	0 to 3/4P	3/32 to 5/32	5
V8	1952	8-3 1/16 x3 1/2	.....	18B	AA	AA	Ch-H-10	.031	3B	.015	5	22 1/2	7.50	2 1/4	2 3/32	0 to 1 1/2N	0 to 3/4P	3/32 to 5/32	7°10′
V8	1953	8-3 1/16 x3 1/2	AA	18B	AA	AA	Ch-H-10	.036	3B	.015	5	22 1/2	8.00	2 13/64	2 3/32	0 to 1 1/2N	0 to 3/4P	3/32 to 5/32	7°10′
V8	1954	8-3 1/16 x3 1/2	.....	18B	AA	AA	Ch-H-10	.035	3B	.015	5	22 1/2	8.00	2 13/64	2 3/32	0 to 1 1/2N	0 to 3/4P	3/32 to 5/32	7°10′
MERCURY																			
9CM	1949	8-3 3/8 x4	.015	10B	.011	.015	Ch-H-10	.030	2B	.015	6	22 1/4	6.80	2 9/16	1 3/4	1/2N to 1/2P	0 to 3/4P	3/32 to 5/32	5
0CM	1950	8-3 3/8 x4	.015	10B	.011C	.015C	Ch-H-10	.025	2B	.015	6	21	6.80	2 9/16	1 3/4	0 to 1 1/2N	0 to 3/4P	3/32 to 5/32	5
1CM	1951	8-3 3/8 x4	.015	10B	.012C	.....	Ch-H-10	.031	2B	.015	6	22 1/4	6.80	2 9/16	1 3/4	0 to 1 1/2N	0 to 3/4P	3/32 to 5/32	5
V8	1952–53	8-3 3/8 x4	.018††	5B	.014C	.018C	Ch-H-10	.031	2B	.015	4	21 1/2	7.20	2 9/16	1 3/4	0 to 1 1/2N	0 to 3/4P	3/32 to 5/32	5
V8	1954	8-3 5/16 x3 7/16	.017††	15B	.019H	.019H	Ch-H-10	.031	3B	.015	5	19	7.50	2 1/16	1 3/4	0 to 1 1/2N	0 to 3/4P	3/32 to 5/32	7
NASH																			
4940	1949	6-3 1/8 x3 3/4	.019	6B	.015H	.015H	AL-A5	.030	TC	.021	5	14	7.00	2 3/32	1 1/4	0 to 1/2P	1/4N to 1/4P	1/16 to 3/16	8 1/2
4960	1949	6-3 5/8 x4 3/8	.023	4 1/2B	.015	.018	(a)	.030	TC	.021	6	17	7.20	2	1 7/16	0 to 1/2P	1/4N to 1/4P	1/16 to 1/8	8 1/2
5040	1950	6-3 1/8 x4	.019	6B	.015H	.015H	AL-A5	.030	TC	.021	5	15	7.00	2 3/32	1 1/4	0 to 1/2P	1/4N to 1/4P	1/16 to 1/8	8 1/2
5060	1950	6-3 5/8 x4 3/8	.023	8 1/2B	.015H	.018H	(a)	.030	TC	.021	6	18	7.30	2	1 7/16	0 to 1/2P	1/4N to 1/4P	1/16 to 1/8	8 1/2
5110	1951	6-3 1/8 x3 3/4	.019	6B	.015H	.015H	AL-A5	.030	TC	.021	5	11	7.25	2 3/32	1 1/8	3/4P to 1 1/4P	1/4P to 3/4P	1/16 to 1/8	8
5140	1951	6-3 1/8 x4	.019	6B	.015H	.015H	AL-A5	.030	TC	.021	5	15	7.00	2 3/32	1 1/4	0 to 1/2P	1/4N to 1/4P	1/16 to 1/8	8 1/2
5160	1951	6-3 5/8 x4 3/8	.022	8 1/2B	.015H	.018H	(a)	.030	TC	.021	6	18	7.30	2	1 7/16	0 to 1/2P	1/4N to 1/4P	1/16 to 1/8	8 1/2
5210	1952	6-3 1/8 x3 3/4	.019	6B	.016C	.018C	AL-A7A	.030	TC	.022	5	11	7.25	2 3/32	31/64	3/4P to 1 1/4P	1/4P to 3/4P	1/16 to 1/4	8
5240	1952	6-3 1/8 x4 1/4	.019	6B	.015H	.015H	AL-A7A	.030	TC	.022	5	.....	7.10	2 3/32	31/64	0 to 1/2P	1/4N to 1/4P	1/16 to 1/8	6 1/2
5260	1952	6-3 1/8 x4 3/8	.023	12 1/2B	.015H	.018H	AL-A7A	.030	TC	.022	6	.....	7.30	2	1 3/32	0 to 1/2P	1/4N to 1/4P	1/16 to 1/8	6 1/2
5310	1953	6-3 1/8 x4	.015	10B	.015H	.015H	AL-A7A	.030	4B	.022	4	.....	7.25	2 3/32	31/64	3/4P to 1 1/4P	1/4P to 3/4P	1/16 to 1/4	8
5310AA	1953	6-3 1/8 x4 1/4	.015	10B	.015H	.015H	AL-A7A	.030	4B	.022	4	.....	7.30	2 3/32	31/64	3/4P to 1 1/4P	1/4P to 3/4P	1/16 to 1/4	8
5340	1953	6-3 1/8 x4 1/4	.015	10B	.015H	.015H	AL-A7A	.030	4B	.022	4	.....	7.45	2 3/32	31/64	0 to 1/2P	1/4N to 1/4P	1/16 to 1/8	6 1/2
5360	1953	6-3 1/2 x4 3/8	.023	12 1/2B	.012H	.016H	AL-A7A	.030	TC	.022	6	.....	7.30	2	1 3/32	0 to 1/2P	1/4N to 1/4P	1/16 to 1/8	6 1/2
541, 542	1954	4-2 21/32 x3 1/2	.015	5B	.015C	.015C	Ch-N-8-B	.024	7B	.015	4	.....	7.20	1 3/4	29/32	2P to 3P	1/2P to 1 1/2P	0 to 1/16	6 1/2
5410	1954	6-3 1/8 x4	.015	10B	.015H	.015H	AL-A7A	.030	TC	.022	4	11	7.25	2 3/32	31/64	3/4P to 1 1/4P	1/4P to 3/4P	1/16 to 1/4	8
5410AA	1954	6-3 1/8 x4 1/4	.015	10B	.015H	.015H	AL-A7A	.030	4A	.022	4	11	7.30	2 3/32	31/64	3/4P to 1 1/4P	1/4P to 3/4P	1/16 to 1/4	8
5440	1954	6-3 1/8 x4 1/4	.015	10B	.015H	.015H	AL-5B	.030	4A	.022	4	14	8.50	2 3/32	31/64	(b)	1/4N to 1/4P	1/16 to 1/8	6 1/2
5460	1954	6-3 1/8 x4 3/8	.023	12 1/2B	.012H	.016H	AL-A7A	.030	TC	.022	6	17	7.60	2	1 3/32	(b)	1/4N to 1/4P	1/16 to 1/8	6 1/2
5460BB	1954	6-3 1/2 x4 3/8	.023	12 1/2B	.012H	.016H	AL-5B	.030	TC	.022	6	17	8.00	2	1 3/32	(b)	1/4N to 1/4P	1/16 to 1/8	6 1/2
OLDSMOBILE																			
76	1949	6-3 1/2 x4 5/8	.013	5B	.008H	.011H	AC-45	.040	TC	.020	5	18 1/2	6.50	2 23/64	1 1/4	0 to 3/4N	1/4N to 3/4P	1/16 to 1/8	4 1/16
88, 98	1949	8-3 3/4 x3 7/16	AA	14B	AA	AA	AC-44	.030	2 1/4B	.015	5	21 1/2	7.25	2 1/4	2	0 to 3/4N	1/4N to 3/4P	1/16 to 1/8	4 1/2
76	1950	6-3 1/2 x4 5/8	.013	4B	.008H	.011H	AC-45	.040	TC	.021	5	18 1/2	6.50	2 23/64	1 1/4	0 to 3/4N	1/4N to 3/4P	1/16 to 1/8	4 1/2
88, 98	1950	8-3 3/4 x3 7/16	.....	13 1/2B	.....	.....	AC-45	.030	2 1/2B	.015	5	21 1/2	7.25	2 1/4	2	0 to 3/4N	1/4N to 3/4P	1/16 to 1/8	4 1/2
88, 98	1951	8-3 3/4 x3 7/16	AA	13 1/2B	AA	AA	AC-46-5	.030	2 1/2B	.016	5	21 1/2	7.50	2 1/4	2	0 to 3/4N	1/4N to 3/4P	1/16 to 1/8	4 1/2
88, 98	1952	8-3 3/4 x3 7/16	.003†	13 1/2B	AA	AA	AC-46-5	.030	2 1/2B	.016	5	21 1/2	7.50	2 1/4	7/8	0 to 3/4N	1/4N to 3/4P	1/16 to 1/8	4°55′
88, 98	1953	8-3 3/4 x3 7/16	.003††	13 1/2B	AA	AA	AC-46-5	.030	2 1/2B	.016	5	21 1/2	8.00	2 1/4	7/8	0 to 3/4N	1/4N to 3/4P	1/16 to 1/8	5
88, 98	1954	8-3 7/8 x3 7/16	ER	13 1/2B	AA	AA	AC-46-5	.030	5B	.016	5	20 1/2	8.25	2 1/4	7/8	0 to 3/4N	1/4N to 3/4P	1/16 to 1/8	5°50′

TUNE-UP DATA ON 1949-1954 CARS

MAKE AND MODEL	No. of Cylinders, Bore and Stroke (In.)	VALVES				IGNITION				Crankcase Capacity (Qts.)	Cooling System Capacity (Qts.)	Compression Ratio (Standard Head)	CRANK-PIN		FRONT AXLE			
		Inlet Tappett Clearance for Valve Timing (In.)	Intake Valve Opens Deg. Before or After T.C.	Operating Tappett Clearance (In.)		Spark Plug		Timing					Diameter (In.)	Length (In.)	Caster (Deg.)	Camber (Deg.)	Toe-In (In.)	Kingpin Inclination (Deg.)
				Intake	Exhaust	Make and Model	Gap (In.)	Spark Occurs—No. Deg. Before or After T.C.	Breaker Gap (In.)									
PACKARD																		
2201, 2211	1949 8-3 1/2x3 3/4	.013	10B	.007	.010	(c)	.028	6B	.017	6	.....	7.00	2 1/4	1 5/16	1/4N to 1/4P	1N to 1 1/4N	0 to 1/16	5°50'
2202, 2222, 2232	1949 8-3 1/2x4 1/4	.013	10B	.007	.010	(c)	.028	6B	.017	6	.....	7.00	2 1/4	1 5/16	1/4N to 1/4P	1N to 1 1/2N	0 to 1/16	5°50'
2206, 2226, 2233	1949 8-3 1/2x4 5/8	AA	4B	AA	AA	(c)	.028	6B	.017	7	.....	7.00	2 1/4	1 3/4	1/4N to 1/4P	1 1/4N to 2 1/4N	0 to 1/16	5°50'
2301	1950 8-3 1/2x3 3/4	.013	15B	.007H	.010H	(c)	.028	6B	.015	7	18	7.00	2 1/4	1 5/16	1/4N to 1 1/2N	1/4N to 1/4P	0 to 1/16	5°50'
2302, 2332	1950 8-3 1/2x4 1/4	.013	15B	.007H	.010H	(c)	.028	6B	.015	7	19	7.00	2 1/4	1 5/16	1/2N to 1 1/2N	1/4N to 1/4P	0 to 1/16	5°50'
2306, 2333	1950 8-3 1/2x4 5/8	.....	4B	.....	.....	(c)	.028	6B	.015	7	19	7.00	2 1/4	1 3/8	1/2N to 1 1/2N	1/4N to 1/4P	0 to 1/16	5°50'
200	1951 8-3 1/2x3 3/4	.012	15B	.007H	.010H	(d)	.028	6B	.015	7	20	7.00	2 1/4	1 5/16	1/2N to 1 1/2N	1/2N to 1/2P	0 to 1/16	5°50'
300	1951 8-3 1/2x4 1/4	AA	15B	AA	AA	(d)	.028	6B	.015	7	20	7.00	2 1/4	1 5/16	1/2N to 1 1/2N	1/2N to 1/2P	0 to 1/16	5°50'
400	1951 8-3 1/2x4 1/4	AA	15B	AA	AA	(d)	.028	6B	.015	7	20	7.80	2 1/4	1 5/16	1/2N to 1 1/2N	1/2N to 1/2P	0 to 1/16	5°50'
200	1952 8-3 1/2x3 3/4	.012	15B	.007H	.010H	(e)	.026	6B	.017	7	20	7.00	2 1/4	1 3/8	1/2N to 1 1/2N	0 to 3/4P	0 to 1/16	5°50'
250, 300	1952 8-3 1/2x4 1/4	NU	15B	AA	AA	(e)	.026	6B	.017	7	20	7.00	2 1/4	1 3/8	1/2N to 1 1/2N	0 to 3/4P	0 to 1/16	5°50'
400	1952 8-3 1/2x4 1/4	NU	15B	AA	AA	(e)	.026	6B	.017	7	20	7.80	2 1/4	1 3/8	1/2N to 1 1/2N	0 to 3/4P	0 to 1/16	5°50'
2601	1953 8-3 1/2x3 3/4	.013	15B	.007H	.010H	(d)	.026	6B	.015	7	20	7.70	2 1/4	1 3/8	1/2N to 1 1/2P	0 to 3/4P	0 to 1/16	5 1/4
2611	1953 8-3 1/2x4 1/4	.013	15B	.007H	.010H	(d)	.026	6B	.015	7	20	8.00	2 1/4	1 3/8	1/2N to 1 1/2P	0 to 3/4P	0 to 1/16	5 1/4
2602, 2606, 2626, 2631	1953 8-3 1/2x4 1/4	AA	15B	AA	AA	(d)	.026	6B	.015	7	20	8.00	2 1/4	1 7/16	1/2N to 1 1/2P	0 to 3/4P	0 to 1/16	5 1/4
5400	1954 8-3 1/2x3 3/4	.012	15B	.007H	.010H	Ch-J-8	.028	6B	.015	7	20	7.70	2 1/4	1 3/32	1/2N to 1 1/2N	1/4N to 3/4P	0 to 1/16	5°50'
5401, 5411	1954 8-3 1/2x4 1/4	.012	10B	.007H	.010H	Ch-J-8	.028	6B	.015	7	20	8.00	2 1/4	1 3/32	1/2N to 1 1/2N	1/4N to 3/4P	0 to 1/16	5°50'
5402	1954 8-3 1/2x4 1/4	NU	10B	AA	AA	Ch-J-8	.028	6B	.015	7	20	8.00	2 1/4	1 3/32	1/2N to 1 1/2N	1/4N to 3/4P	0 to 1/16	5°50'
5406, 5426, 5431	1954 8-3 5/16x4 1/2	NU	22B	AA	AA	Ch-J-8	.028	TC	.015	7	20	8.70	2 1/4	1 3/32	1/2N to 1 1/2N	1/4N to 3/4P	0 to 1/16	5°50'
PLYMOUTH																		
P-17, P-18	1949 6-3 1/4x4 3/8	.014C	12B	.008H	.010H	AL-A5R	.038	2A	.020	.....	15	7.00	2 1/16	1	1N to 1P	0 to 3/4P	0 to 1/16	5 1/4
P-19, P-20	1950 6-3 1/4x4 3/8	.014	12B	.008H	.010H	AL-AR5	.035	TC	.020	.....	15	7.00	2 1/16	1	1N to 1P	0 to 3/4P	0 to 1/16	5 1/4
P-22, P-23	1951 6-3 1/4x4 3/8	.014	12B	.008H	.010H	AL-AR8	.035	2B	.019	5	13	7.00	2 1/16	1 1/4	1N to 1P	3/8N to 3/8P	0 to 1/16	5 3/4
P-22, P-23	1952 6-3 1/4x4 3/8	.014	12B	.010H	.010H	AL-AR8	.035	2B	.020	5	13	7.00	2 1/16	1 1/8	1N to 1P	3/8N to 3/8P	0 to 1/16	5 3/4
P-24	1953 6-3 1/4x4 3/8	.014	12B	.010H	.010H	AL-AR8	.035	2B	.020	5	13	7.10	2 1/16	.....	1N to 1P	3/8N to 3/8P	0 to 1/16	5 3/4
P-25 (Early)	1954 6-3 1/4x4 3/8	.014	12B	.010H	.010H	AL-4S-140	.035	2B	.020	5	13	7.10	2 1/16	.....	1N to 1P	3/8N to 3/8P	0 to 1/16	5 3/4
P-25 (Late)	1954 6-3 1/4x4 5/8	.014	12B	.010H	.010H	AL-4S-140	.035	2B	.020	5	14	7.25	2 1/16	15/16	1N to 1P	3/8N to 3/8P	0 to 1/16	5 3/4
PONTIAC																		
25	1949 6-3 3/16x4	.012	5B	.012H	.012H	AC-45	.025	4B	.020	5	18 1/4	6.50	2 1/8	1 3/32	3/4N to 1N	0	0 to 1/16	5
27	1949 8-3 1/16x3 3/4	.012	5B	.012H	.012H	AC-45	.025	4B	.015	5	20 1/3	6.50	2	1 1/16	3/4N to 1N	0	0 to 1/16	5
25	1950 6-3 3/16x4	.013H	5B	.013H	.013H	AC-45	.025	6B	.022	5	18 1/2	6.50	2 1/16	1 3/32	3/4N	0	0 to 1/16	5 1/2
27	1950 8-3 3/8x3 3/4	.013H	5B	.013H	.013H	AC-45	.025	6B	.016	5	20	6.50	2	1 1/16	3/4N	0	0 to 1/16	5 1/2
25	1951 6-3 3/16x4	.015	5B	.012H	.012H	AC-45	.026	6B	.022	6	18 1/2	6.50	2 1/16	1 1/32	1/2N to 1N	1/4N to 1/4P	0 to 1/16	5
27	1951 8-3 3/8x3 3/4	.015	5B	.012H	.012H	AC-45	.026	6B	.016	6	19 1/2	6.50	2	1 1/32	1/2N to 1N	1/4N to 1/4P	0 to 1/16	5
25	1952 6-3 3/16x4	.015C	5B	.011H	.013H	AC-44-5	.026	6B	.022	5	18	6.80	2 1/8	1 7/32	3/4N	0	0 to 1/16	5
27	1952 8-3 3/8x3 3/4	.015C	5B	.011H	.013H	AC-44-5	.026	6B	.016	5	19	6.80	2	1	3/4N	0	0 to 1/16	5
25	1953 6-3 3/16x4	.015C	12 1/2B	.012H	.012H	AC-44-5	.026	TC	.022	5	18 1/3	7.00••	2 1/8	1 7/32	1/4N to 1/4P	1/4P to 3/4P	0 to 1/16	5 1/4
27	1953 8-3 3/8x3 3/4	.015C	5B	.012H	.012H	AC-44-5	.026	6B	.016	5	19 1/2	6.80••	2	1	1/4N to 1/4P	1/4P to 3/4P	0 to 1/16	5 1/4
25	1954 6-3 3/16x4	.015C	12 1/2B	.012H	.012H	AC-44-5	.026	3B	.016	5	18 1/3	7.00••	2 1/8	1 7/32	1/2N to 1/2P	0 to 1P	0 to 1/16	.....
27, 28	1954 8-3 5/8x3 3/4	.015C	5B	.012H	.012H	AC-44-5	.026	6B††	.016	5	18 3/4	6.80••	2	1	1/2N to 1/2P	0 to 1P	0 to 1/16	.....
STUDEBAKER																		
8G	1949 6-3x4	.020	15B	.016C	.016C	Ch-J-7	.025	2B	.020	5	10	6.50	1 15/16	1 1/4	1 1/2P	1/4P to 3/4P	1/16 to 1/8	5 3/4
16A	1949 6-3 1/8x4 3/8	.020	15B	.016C	.016C	Ch-J-7	.025	2B	.020	6	13	6.50	2 1/16	1 3/8	2N to 3N	1/4P to 3/4P	1/16 to 1/8	5 1/4
9G	1950 6-3x4	.020	15B	.016C	.016C	Ch-J-7	.025	2B	.020	5	10	7.00	1 15/16	1 1/4	0 to 1N	0 to 1P	1/16 to 1/8	5 1/4
17A	1950 6-3 1/8x4 3/8	.020	15B	.016C	.016C	Ch-J-7	.025	2B	.022	6	13 1/2	7.00	2 1/16	1 3/32	1 1/2N to 2 1/2N	0 to 1P	1/16 to 1/8	5 1/4
10G	1951 6-3x4	.020	15B	.016C	.016C	Ch-J-7	.025	2B	.020	5	10	7.00	1 15/16	1 1/4	1N to 2 1/2N	0 to 1P	1/16 to 1/8	5 1/4
H	1951 8-3 5/8x3 3/4	.020	11B	.015	.015	Ch-H-8	.035	8B	.016	6	17 1/4	7.00	2	1 11/32	1N to 2 1/2N	0 to 1P	1/16 to 1/8	5 1/4
12G	1952 6-3x4	.020	15B	.016C	.016C	Ch-J-7	.025	2B	.020	5	10	7.00	1 13/16	1 29/32	1 3/4N	0 to 1P	1/16 to 1/8	6
3H	1952 8-3 5/8x3 1/4	.020	11B	.015C	.015C	Ch-H-8	.035	8B	.016	6	17 1/4	7.00	2	1 27/32	1 3/4N	0 to 1P	1/16 to 1/8	6
14G	1953 6-3x4	.020	15B	.016C	.016C	Ch-J-7	.025	2B	.020	5	10	7.00	1 13/16	1 29/32	1 3/4N to 3/4P	0 to 1P	1/16 to 1/8	6
4H	1953 8-3 5/8x3 1/4	.030	11B	.022H	.022H	Ch-H-10	.035	4B	.016	6	17 1/4	7.00	2	1 27/32	1 3/4N to 3/4P	0 to 1P	1/16 to 1/8	6
15G	1954 6-3x4	.020	15B	.016C	.016C	Ch-J-7	.031	2B	.020	5	10	7.50	1 13/16	1 29/32	1N to 2 1/2N	0 to 1P	1/16 to 1/8	6
5H, 5HY	1954 8-3 5/8x3 1/4	.030	11B	.022H	.022H	Ch-H-11	.036	4B	.013	6	17 1/3	7.50	2	1 13/16	1N to 2 1/2N	0 to 1P	1/16 to 1/8	6
WILLYS																		
VJ-2, 4-63	1949 4-3 1/4x4 3/8	.020	9B	.014	.014	AL-AN7	.030	5B	.020	4	11	6.48	1 15/16	1 5/16	1P	1P	1/16 to 1/8	5 1/4
4-63 *	1949 4-3 1/4x4 3/8	.020	9B	.014	.014	AL-AN7	.030	5B	.022	4	11	6.48	1 15/16	1 5/16	1P	1P	1/16 to 1/8	5 1/4
6-63	1949 6-3x3 1/2	.020	9B	.014	.014	AL-A7F	.030	TC	.020	4	12	6.42	1 7/8	1 3/32	1P	1P	1/16 to 1/8	5 1/4
4-63	1950 4-3 1/4x4 3/8	.020	9B	.016	.016	AL-AN7	.030	5B	.022	4	11	6.48	1 15/16	1 5/16	1P	1 1/2P	1/16 to 1/8	5 1/4
6-63	1950 6-3x3 1/2	.020	5B	.016	.016	(f)	.030	TC	.020	5	8 3/4	6.42	1 23/32	1 1/16	1P	1 1/2P	1/16 to 1/8	5
473-SD	1951 4-3 1/4x4 3/8	.026	9B	.018C	.012C	Ch-J-7	.030	TC	.020	4	11	7.40	1 15/16	1 5/16	1P	1P	1/16 to 1/8	5
673-SW	1951 6-3 1/4x3 1/2	.020	5B	.016	.016	Ch-J-7	.030	TC	.020	5	9	6.90	1 7/8	1 1/16	1P	1P	1/16 to 1/8	5
685	1952 6-3 1/4x3 1/2	.027	9B	.018	.016	Ch-	.030	TC	.020	5	11	7.60	1 7/8	29/32	1N to 1P	1 1/4P to 1 3/4P	1/16 to 1/8	8 1/4
685A	1953 6-3 1/4x3 1/2	.027	9B	.018	.016	Ch-J-8	.030	TC	.020	5	11	7.60	1 7/8	29/32	1N to 1P	1 1/4P to 1 3/4P	1/16 to 1/8	8 1/4
675A	1953 6-3 1/4x3 1/2	.020	5B	.016	.016	Ch-J-8	.030	TC	.020	5	11	6.90	1 7/8	29/32	1N to 1P	1 1/4P to 1 3/4P	1/16 to 1/8	8 1/4
6-226	1954 6-3 1/16x4 3/8	.018	10B	.014C	.014C	Ch-J-8	.030	5B	.020	5	13	7.30	2 1/16	1 1/16	1/2P to 1 1/2P	3/4P to 1 1/4P	1/16 to 1/8	8 1/4
685B	1954 6-3 1/8x3 1/2	.026	9B	.018C	.016C	Ch-J-8	.030	5B	.020	5	11	7.60	1 15/16	1/8	1/2P to 1 1/2P	3/4P to 1 1/4P	1/16 to 1/8	8 1/4

FOOTNOTES AND ABBREVIATIONS

†—Off seat.

▲—Same as series 50 and 70 when hydraulic valve lifters are used.

■—13½ when equipped with Dynaflow transmission.

•—18 when equipped with Dynaflow transmission.

*—Powerglide chassis model available at extra cost.

‡—Adjustment automatic with hydraulic valve lifters when equipped with Powerglide transmission.

♦—10½B when equipped with Powerglide transmission.

••—7.50 when equipped with Gyro-Matic or Power-flite transmission.

††—Open.

▲▲—Hydramatic chassis model available at extra cost.

■■—Le Mans Dual Jetfire engine which is available at extra cost.

••—7.70 when equipped with Hydramatic transmission.

‡‡—3B when equipped with Hydramatic transmission.

(a)—AC-44 or AL-A5.

(b)—0 to 1½P with mechanical steering, ½P to 1P with power steering.

(c)—AC-104, Ch-Y4R or AL-P4.

(d)—AC-46-5, Ch-J-8 or AL-A5.

(e)—AC-46-5, Ch-J-8 or AL-A5H.

(f)—Ch-J-7 or AL-AN7.

A—After.

AA—Automatic adjustment with hydraulic valve lifters.

AC—A. C. Spark Plug Div.

AL—The Electric Auto-Lite Co.

B—Before.

C—Cold.

Ch—Champion Spark Plug Co.

ER—End of ramps used for valve timing.

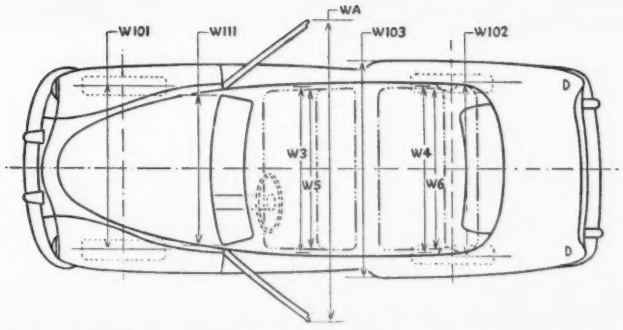
H—Hot.

N—Negative.

P—Positive.

TC—Top center.

VTS—Valve train solid.



1954 PASSENGER CAR BODY DATA

All dimensions apply to 5 or 6 passenger, 4-door sedan or equivalent model.

PASSENGER CAR MAKE AND MODEL	MISCELLANEOUS								GENERAL DIMENSIONS (Ins.)										
	Doors Hinged								L101	Overhang		Tread		Overall Dimensions				W111
										L104	L105	W101	W102	L103	W103	WA	HB	
	Front Door	Rear Door	Type of Finish	Hood Opening	Hood Counterbalanced	Hood Release Control	Windshield Type	Rear Window Type	Wheelbase	Front—Including Bumper Guards	Rear—Including Bumper Guards	Front	Rear	Length—Bumper to Bumper	Width	Width—Doors Open	Height—Unloaded	Windshield—Max Width
Buick Special 40, Century 60	F	F	L	Ff	Y	Ex	1C	WA	122.0	35.6	48.7	59.0	59.0	206.3	76.6	145.8	62.3	61.1
Super 50	F	F	L	Ff	Y	Ex	1C	WA	127.0	36.3	53.5	59.0	62.2	216.8	79.8	147.8	64.2	61.0
Roadmaster 70	F	F	L	Ff	Y	Ex	1C	WA	127.0	36.3	53.5	59.0	62.2	216.8	79.8	147.8	64.4	61.0
Cadillac 6219	F	F	L	F	Y	Ex	1C	1C	129.0	34.9	52.5	60.0	63.1	216.4	79.6	135.0	64.1	58.2
6019	F	F	L	F	Y	Ex	1C	1C	133.0	34.9	59.5	60.0	63.1	227.4	79.6	135.0	64.1	58.2
75	F	F	L	F	Y	Ex	1C	Fl	149.8	34.9	52.5	60.0	63.2	237.2	79.6	135.0	66.2	58.2
Chevrolet 150, 210, Bel Aire	F	F	L	F	Y	Ex	1C	1C	115.0	33.0	48.4	56.7	58.8	196.5	75.0	140.0	64.8	50.6
Corvette 2934	F	N	L	F	N	In	1C	Fl	102.0	26.1	38.9	57.0	59.0	167.0	72.2	125.0	52.1	51.9
Chrysler Windsor 6, C-62	F	F	E	Ff	Y	Ex	1C	1C	125.5	37.4	52.8	56.3	59.6	215.6	77.5	148.0	64.3	55.3
New Yorker 8, C-63	F	F	E	Ff	Y	Ex	1C	1C	125.5	37.4	52.8	56.3	59.6	215.6	77.5	148.0	64.5	55.3
Custom Imperial 8, C-64	F	F	E	Ff	Y	Ex	1C	1C	133.5	41.0	49.3	57.3	60.4	223.8	77.8	148.0	64.6	55.3
Crown Imperial 8, C-66	F	F	E	Ff	Y	Ex	1C	1C	145.5	41.0	49.9	57.9	66.0	236.4	82.1	153.9	70.6	53.4
De Soto Powermaster S20, Firedome S19	F	F	E	Ff	Y	Ex	1C	1C	125.5	37.0	52.0	56.3	59.6	214.5	77.6	148.0	64.3	55.3
Dodge Meadbk. D50-1, Coronet D50-2	F	F	E	Ff	Y	Ex	1C	1C	119.0	34.6	51.9	55.9	58.8	205.5	73.5	142.8	64.0	55.8
Royal D50-3	F	F	E	Ff	Y	Ex	1C	1C	119.0	34.6	51.9	55.9	58.8	205.5	74.3	142.8	64.0	55.8
Meadowbrook D51-1	F	F	E	Ff	Y	Ex	1C	1C	119.0	34.6	51.9	56.3	59.1	205.5	73.5	142.8	64.0	55.8
Coronet D51-2	F	F	E	Ff	Y	Ex	1C	1C	119.0	34.6	51.9	56.3	59.1	205.5	73.5	142.8	63.9	55.8
Ford Mnline, Cstline, Crstline, 6-8	F	F	E	Ff	Y	Ex	1C	1C	115.5	35.1	47.6	58.0	56.0	198.3	74.2	146.3	64.1	56.0
Henry J Corsair 543	F	N	E	Ff	N	Ex	2F	1C	100.0	38.1	43.6	54.0	54.0	181.8	69.4	148.5	61.9	51.4
Corsair Deluxe 544	F	N	E	Ff	N	Ex	2F	1C	100.0	38.5	43.6	54.0	54.0	182.1	69.4	148.5	61.9	51.4
Hudson Jet 1D	F	F	L	F	Y	Ex	1C	1C	104.4	32.1	44.2	54.0	52.0	180.7	67.1	138.4	62.8	46.9
Super Jet 2D, Jet Liner 3D	F	F	L	F	Y	Ex	1C	1C	104.4	32.1	44.2	54.0	52.0	180.7	67.6	138.4	62.8	46.9
Wasp 4D	F	F	L	F	N	Ex	1C	1C	119.9	35.5	46.1	58.5	55.0	201.5	77.6	146.1	61.9	55.5
Super Wasp 5D	F	F	L	F	N	Ex	1C	1C	119.9	35.5	47.1	58.5	55.0	202.9	77.6	146.1	61.9	55.5
Hornet 7D	F	F	L	F	Y	In	1C	1C	123.9	37.9	47.1	58.5	55.0	208.9	77.6	146.1	61.9	55.5
Kaiser Special K545	F	F	E	Ff	Y	In	1C	1C	118.5	42.4	54.8	58.0	58.8	215.6	74.9	132.5	62.6	58.0
Manhattan K542	F	F	E	Ff	Y	In	1C	1C	118.5	42.4	54.8	58.0	58.8	215.6	74.9	132.5	62.6	58.0
Lincoln	F	F	LE	Ff	Y	Ex	1C	1C	123.0	37.5	54.3	58.5	58.5	214.8	77.1	149.0	64.2	56.0
Mercury	F	F	E	Ff	Y	Ex	1C	1C	118.0	36.7	51.5	58.0	56.0	203.7	74.4	146.3	64.1	56.0
Nash Metropolitan 541, 542	F	N	E	Ff	N	Ex	1F	3C	85.0	28.4	36.2	45.3	44.8	149.5	61.5	135.0	NA	43.8
Rambler 5410	F	F	E	Ff	Y	Ex	1C	3C	108.0	31.4	54.0*	53.4	53.0	193.4*	72.8	130.3	NA	50.0
Statesman 5440	F	F	E	Ff	Y	Ex	1C	3C	114.3	34.9	63.1*	55.5	59.7	202.3*	78.0	148.3	NA	59.3
Ambassador 5460	F	F	E	Ff	Y	Ex	1C	3C	121.3	34.9	53.1*	55.6	60.5	209.3*	78.0	148.3	NA	59.3
Oldsmobile 88, Super 88	F	F	L	F	Y	Ex	1C	1C	122.0	33.9	49.3	59.0	58.0	205.3	78.3	137.7	62.2	58.0
98	F	F	L	F	Y	Ex	1C	1C	126.0	33.9	54.3	59.0	58.0	214.3	78.3	137.7	62.2	58.0
Packard Clipper 5400-1-11	F	F	L	Ff	Y	Ex	1C	1C	122.0	36.9	56.4	59.8	59.9	215.5	77.9	148.0	NA	56.4
Packard 5402-06	F	F	L	Ff	Y	Ex	1C	1C	127.0	35.3	54.3	60.0	60.8	216.5	77.9	148.0	NA	56.4
Custom 5426	F	F	L	Ff	Y	Ex	1C	1C	149.0	35.3	54.3	60.0	60.9	238.5	77.9	148.0	NA	56.4
Plymouth Plaza, Savoy, Blvdr., P25-1-2-3	F	F	E	Ff	Y	Ex	1C	1C	114.0	32.0	47.5	55.9	58.5	193.5	74.3	142.4	63.6	54.1
Pontiac Chieftain 6 & 8, 5425-27	F	F	L	F	Y	Ex	1C	WA	122.0	34.6	46.1	58.5	59.1	202.7	76.6	140.7	64.7	50.0
Star Chief 5428	F	F	L	F	Y	Ex	1C	WA	124.0	34.6	55.1	58.5	59.1	213.7	76.6	140.7	64.7	50.0
Studebaker Champion 15G	F	F	E	Ff	Y	Ex	1C	1C	116.5	35.2	46.9	56.7	55.7	198.6	70.4†	135.4	61.8	50.1
Commander 5H	F	F	E	Ff	Y	Ex	1C	1C	116.5	35.2	46.9	56.7	55.7	198.6	70.4†	135.4	62.0	50.1
Land Cruiser 5HY	F	F	E	Ff	Y	Ex	1C	1C	120.5	35.2	46.9	56.7	55.7	202.6	70.4	135.4	62.0	50.1
Willys Ace, Eagle 6-226	F	F	E	F	Y	Ex	1C	1C	108.0	32.8	42.2	58.0	57.0	183.0	72.0	139.5	62.6	55.7
Ace, Eagle, Lark 685B	F	F	E	F	Y	Ex	1C	1C	108.0	32.8	42.2	58.0	57.0	183.0	72.0	139.5	62.6	55.7

ABBREVIATIONS

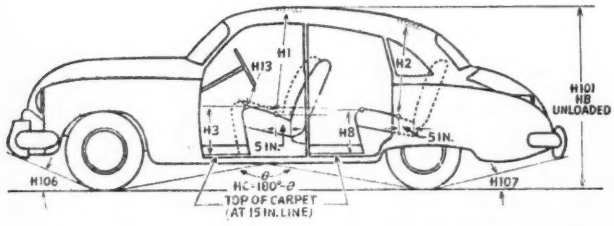
*—Models not equipped with outside spare tire.
†—Regal models; Custom and DeLuxe models, 69.5.

1C—One piece, curved.
3C—Three piece, curved.
E—Enamel. **Ex**—External.
1F—One piece, flat.
2F—Two piece, flat.

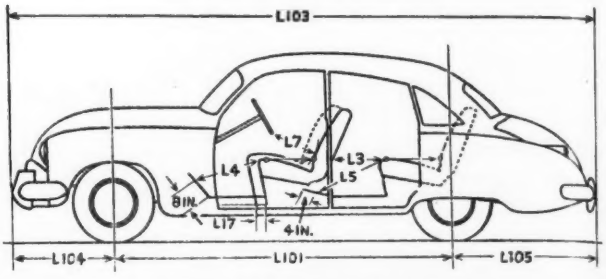
F—Front.
Ff—Front, full.
Fl—One piece, flat.
In—Internal.
L—Lacquer.

LE—Lacquer or enamel.
N—No or none.
NA—Not available.
WA—One piece, wrap around.
Y—Yes.

HEIGHT DIMENSIONS



LENGTH DIMENSIONS



1954 PASSENGER CAR BODY DIMENSIONS

All dimensions apply to 5 or 6 passenger, 4-door sedan or equivalent model.

PASSENGER CAR MAKE AND MODEL	HEIGHT DIMENSIONS									WIDTH DIMENSIONS				LENGTH DIMENSIONS				
	Interior					Exterior				Interior				Interior				
	H1	H2	H3	H8	H13	H106	H107	HC	HD	W3	W4	W5	W6	L3	L4	L5	L7	L17
	Front Headroom	Rear Headroom	Front Seat Height to Floor	Rear Seat Height to Floor	Steering Wheel Clearance to Seat Cushion	Angle of Approach—Deg	Angle of Departure—Deg	Ramp Breakover Angle—Deg	Minimum Road Clearance—In	Front Seat Shoulder Room	Rear Seat Shoulder Room	Front Seat Hip Room	Rear Seat Hip Room	Back of Front Seat to Rear Seat Back	Leg Room—Front	Leg Room—Rear	Steering Wheel Clearance	Adjustment of Front Seat
Buick Special 40	35.6	34.0	12.8	12.0	5.5	23.0	15.0	12.5	6.5 FSR	58.2	58.7	62.5	62.4	32.4	42.3	41.8	13.6	4.4
Super 50	36.6	35.2	13.5	12.6	5.1	20.5	13.5	12.0	6.5 FSR	59.4	58.7	64.9	65.7	34.8	43.3	45.2	13.5	4.7
Century 60	35.6	34.0	12.8	12.0	5.5	23.0	15.0	12.5	6.5 FSR	58.2	56.7	62.5	62.4	32.4	42.3	41.4	13.6	4.4
Roadmaster 70	35.9	35.1	13.5	12.3	4.4	21.0	13.5	12.0	6.7 FSR	59.4	58.7	64.7	65.7	35.0	43.4	45.6	13.5	4.7
Cadillac 6019	35.8	35.6	14.8	12.3	5.4	18.6	11.9	11.4	6.2 FFK	59.4	58.9	64.2	65.2	35.8	43.3	45.8	14.1	4.0
6219	35.8	35.6	14.8	12.3	5.4	18.6	13.5	11.8	6.2 FFK	59.4	58.9	64.3	65.2	35.8	43.2	45.8	14.1	4.0
7523	36.7	35.5	14.8	14.8	5.7	20.9	14.7	11.6	6.8 ER	58.3	58.8	64.1	59.4	32.7	43.3	.....	14.3	4.0
Chevrolet 150, 210, Bel Aire	35.8	35.1	13.5	12.6	4.4	26.2	15.6	NA	7.0 UEP	55.1	54.9	59.9	60.5	32.0	42.7	41.4	13.7	4.4
Corvette	35.4	N	8.2	N	5.3	30.0	19.5	15.0	6.0 BDO	51.3	N	57.2	N	N	41.0	N	13.4	4.4
Chrysler Windsor 6, C-62	36.5	36.0	14.6	14.3	5.8	19.0	14.0	15.0	7.6 RFK	56.6	53.8	61.5	60.1	33.3	43.5	41.9	15.1	5.0
New Yorker 8, C-63	36.5	36.0	14.6	14.3	5.8	20.0	15.0	16.0	7.9 RFK	56.6	53.8	61.5	60.1	33.3	43.5	41.9	15.1	5.0
Custom Imperial 8, C-64	36.5	36.0	14.3	14.3	5.8	23.0	15.0	14.0	7.5 RFK	56.6	53.8	61.5	59.8	37.3	44.5	45.6	15.1	5.0
Crown Imperial 8, C-66	39.5	35.5	13.5	15.0	7.0	25.0	NA	14.0	8.5 RFK	56.0	56.3	60.3	52.0	53.1	46.0	44.1	15.1	5.0
De Soto Powermaster 6, Firedome 8	36.3	35.3	14.9	14.3	5.4	23.0	17.0	15.0	7.0 FRK	57.0	54.5	61.5	60.1	33.3	44.0	41.9	15.1	5.0
Dodge Meadowbrook, Coronet, 6-D51	36.4	36.4	14.3	13.8	6.1	25.0	15.0	15.0	7.5 F	57.1	55.3	60.6	60.5	32.5	44.0	40.5	15.4	5.0
Meadowbrook, Coronet, Royal, V8-D50	36.4	36.4	14.3	13.8	6.1	25.0	16.0	15.0	7.4 FRW	57.1	55.3	60.6	60.5	32.5	44.0	40.5	15.4	5.0
Ford Mainline, Customline, Crestline, 6-8	35.4	34.2	13.0	13.5	5.9	22.4	13.7	15.8	6.6 RSA	55.2	54.7	58.9	58.9	31.1	42.8	41.5	13.8	4.1
Henry J Corsair 543, Corsair Deluxe 544	35.4	(a)	11.7	(b)	6.9	21.0	18.0	11.0	7.5 FTB	53.5	51.5	57.4	56.8	(c)	43.4	(d)	14.7	7.0
Hudson Jet 1D	36.4	34.6	13.3	14.8	5.9	27.0	16.5	10.8	NA	54.0	55.0	58.0	58.0	29.3	41.9	40.3	13.3	4.0
Super Jet 2D, Jet Liner 3D	36.4	34.6	13.3	14.8	5.9	28.0	17.0	11.3	NA	54.0	55.0	58.0	58.0	29.3	41.9	40.3	13.3	4.0
Wasp 4D	36.5	35.3	12.1	12.6	6.9	22.0	14.6	15.5	6.1 RSA	62.0	58.0	64.0	64.0	32.3	43.3	38.0	12.6	4.0
Super Wasp 5D	36.5	35.3	12.1	12.6	6.9	22.0	15.2	15.5	6.1 RSA	62.0	58.0	64.0	64.0	32.3	43.3	38.0	12.6	4.0
Hornet 7D	36.5	35.3	12.1	12.6	6.9	18.6	15.2	15.0	6.1 RSA	62.0	58.0	64.0	64.0	32.3	43.3	38.0	12.6	4.0
Kaiser Special K541, Manhattan K542	35.7	33.7	11.0	12.7	5.5	20.5	12.5	13.0	7.0 FTB	58.9	58.5	63.2	63.1	31.2	45.3	39.6	14.0	7.0
Lincoln	35.5	34.7	13.5	12.3	4.9	20.0	11.7	13.9	7.4 FCM	57.5	57.2	62.3	62.1	32.0	44.3	42.8	14.3	4.1
Mercury	35.4	34.2	13.0	13.5	5.4	23.1	11.8	13.7	6.3 RSA	55.3	54.8	58.9	58.9	30.8	42.8	41.5	13.5	4.1
Nash Metropolitan 542	35.5	N	10.0	N	6.8	30.8	20.5	20.0	NA	45.3	N	49.8	N	N	43.3	N	14.6	4.0
Rambler 5410	36.5	35.5	12.0	14.0	6.3	23.0	15.3†	19.0	NA	52.5	52.3	60.0	59.5	30.3	44.0	39.5	14.0	5.5
Statesman 5440	37.5	36.0	12.3	13.8	6.4	25.0	14.5*	13.0	NA	61.5	61.3	65.0	64.5	41.8	42.5	40.1	14.3	5.0
Ambassador 5460	37.5	36.0	12.3	13.8	6.4	25.5	15.5▲	13.5	NA	61.5	61.3	65.0	64.5	41.8	42.5	40.1	14.3	5.0
Oldsmobile 88	35.6	34.6	13.2	12.4	4.9	24.3	15.0	11.7	6.3 FSR	58.2	56.7	62.3	62.4	32.6	42.9	43.8	12.9	4.4
Super 88	35.6	33.8	13.2	13.2	4.9	24.3	15.0	11.7	6.3 FSR	58.2	56.7	62.3	62.1	32.6	42.9	44.3	12.9	4.4
98	35.6	33.8	13.1	13.0	4.9	24.3	13.3	11.2	6.2 FSR	58.2	56.7	62.3	62.1	32.4	42.8	44.0	12.9	4.4
Packard Clipper 5400-1-11	36.0	34.0	13.9	13.4	5.1	20.3	8.8	16.0	NA	57.0	55.5	62.8	62.0	32.1	43.5	43.8	14.9	4.9
Packard 5402-31-06	36.7	35.9	13.1	15.1	5.7	20.1	9.4	12.0	NA	57.0	55.5	62.8	62.0	37.1	43.5	48.8	14.9	4.9
Custom 5426	36.0	34.8	14.0	13.8	5.7	NA	NA	10.5	NA	57.0	55.5	62.8	58.0	55.3	43.0	.....	14.3	4.9
Plymouth Plaza, Savoy, Blvdr., P25-1-2-3	36.6	35.1	14.4	15.0	5.5	25.0	16.0	15.0	7.4 F	55.5	53.5	59.8	58.8	31.1	43.8	43.6	14.8	5.0
Pontiac Chieftain 6 and 8, 5425-27	36.1	35.6	13.9	12.6	5.3	21.3	14.3	13.3	6.8 UEP	55.1	54.8	59.8	60.7	34.1	42.8	42.7	13.6	4.6
Star Chief 5428	36.1	35.6	13.9	12.6	5.3	21.3	13.0	13.1	6.8 UEP	55.1	54.8	59.8	60.7	34.1	42.8	42.7	13.6	4.6
Studebaker Champion 15G	36.0	34.5	13.5	12.0	5.4	21.0	15.5	7.5	6.8 FCM	55.5	54.5	59.5	59.0	28.3	42.5	39.0	15.5	5.5
Commander 5H	36.0	34.5	13.5	12.0	5.4	22.0	15.0	7.5	7.4 FCM	55.5	54.5	59.5	59.0	28.3	42.5	39.0	15.5	5.5
Land Cruiser 5HY	36.0	34.5	13.5	12.0	5.4	22.0	15.0	7.5	7.4 FCM	55.5	54.5	59.5	59.0	32.0	42.5	41.0	15.5	5.5
Willys Ace, Eagle 6-226	34.6	34.1	12.3	12.9	5.4	28.0	22.0	17.2	6.4 M	57.0	57.0	61.0	61.0	28.4	41.6	37.9	12.0	4.0
Ace, Eagle, Lark 685B	34.6	34.1	12.3	12.9	5.4	28.0	22.0	17.2	6.4 M	57.0	57.0	61.0	61.0	28.3	41.6	37.9	12.0	4.0

ABBREVIATIONS

†—13.3 with outside spare tire.
*—11.5 with outside spare tire.
▲—12.5 with outside spare tire.
(a)—33.1 with conventional seat; 33.6 with folding seat.
(b)—13.0 with conventional seat; 12.2 with folding seat.
(c)—25.9 with conventional seat; 27.3 with folding seat.
(d)—37.2 with conventional seat; 37.5 with folding seat.
BDO—Below door opening.
ER—Exhaust resonator.
F—Frame.
FCM—No. 2 frame cross member.
FFK—Front of frame kick up.
FRK—Frame at rear kick up.
FRW—Front of rear wheels.
FSR—Frame side rail.
FTB—Frame below toe board.
M—At muffler.
N—No or none.
NA—Not available.
RFK—Rear of front kick up.
RSA—Rear shock absorber.
UEP—Under exhaust pipe.

GENERAL ENGINE DATA—PISTON SPECIFICATIONS

PASSENGER CAR MAKE AND MODEL	ENGINE: Type	Valve Arrangement	Number of Cylinders, Bore and Stroke	Pistoh Displacement—Cu. In.	Compression Ratio (to—1): Standard	Compression Ratio (to—1): Optional	Cylinder Head Material	Mounting Points: Front	Mounting Points: Rear	Taxable Horsepower	Adv. Max. Brake Hp. at Engine RPM	Max. Torque (lb. ft. at RPM)	Recommended Idle Speed—RPM	Shipping Weight (lbs.) 5-6 Pass., 4 Door Sedan	Weight per Cu. In.#	Weight per Hp.#	Horsepower per Cu. In.	PISTONS: Material	Description and Finish	Weight—Oz. (Piston Only)	Clearance: Top Land	Clearance: Top of Skirt	Clearance: Bottom of Skirt	Ring Groove Depth: No. 1 Ring	Ring Groove Depth: No. 2 Ring	Ring Groove Depth: No 3 Ring	Ring Groove Depth: No 4 Ring
Buick	Special 40	V	IH	8-3 5/16 x3.20	264.0	7.20	8.10*	CI	2	1	42.05	113-4200	228-2400	450	3714	15.96	29.47	.542	Ala	Cg,Ts,An	16.25[14]	.0250	.0015	.0015	.1955	.1980	.1980	N
	Super 50	V	IH	8-4x3.20	322.0	8.00	8.50*	CI	2	1	51.20	177-4100	295-2000	450	4105	14.30	26.02	.550	Ala	Cg,Ts,An	19.95	.0250	.0017	.0017	.2145	.2170	.2170	N
	Century 60	V	IH	8-4x3.20	322.0	8.00	8.50*	CI	2	1	51.20	195-4100	302-2400	450	3786	13.31	21.98	.606	Ala	Cg,Ts,An	19.95	.0250	.0017	.0017	.2145	.2170	.2170	N
	Roadmaster 70	V	IH	8-4x3.20	322.0	8.50	N	CI	2	1	51.20	200-4100	309-2100	450	4250	14.75	23.75	.621	Ala	Cg,Ts,An	19.95	.0250	.0017	.0017	.2145	.2170	.2170	N
Cadillac	60, 62, 75	V	IH	8-3 1/8 x3 5/8	331.0	8.25	N	CI	2	1	46.50	230-4400	330-2700	400D	4330	13.08	18.83	.695	Ala	T,Cg,St	19.68	.0280	.0009	.0007	.1870	.1870	.1900	N
Chevrolet	1500, 2100, 2400	IL	IH	6-3 1/16 x3 1/4	235.5	7.50	N	CAl	2	1	30.40	115-3701[10]	200-2000	475Nu[11]	3210	15.75	32.25[12]	.488[13]	Als	Fh,Ov,Te,Ce	18.88	.0135	.0008†	.....	.1880	.1880	.1890	N
	Corvette 2900	IL	IH	6-3 1/16 x3 1/4	235.5	8.00	N	CAl	2	1	30.40	150-4200	223-2400	475D	2705	13.61	21.37	.637	Als	Fh,Ov,Te,Ce	18.88	.0135	.0008	.....	.1880	.1880	.1880	N
Chrysler	Windsor C62	IL	L	6-3 7/16 x4 3/4	264.5	7.00	N	CI	1	2	28.36	119-3600	218-1600	475	3655	15.71	31.92	.450	Ala	Us,Cg,Tc	18.50	.0300	.0007■	.....	.1765	.1765	.1780	.178
	New Yorker C63-1	V	IH	8-3 1/8 x3 5/8	331.1	7.50	N	CI	2	1	46.51	195-4400	320-2000	475	3970	13.50	22.92	.589	Ala	Ss,Si,Cg,Tc	20.80	.0220	.0010●	.....	.2010	.2010	.1980	N
	New Yorker C63-2, Imperial C64, C66	V	IH	8-3 1/8 x3 5/8	331.1	7.50	N	CI	2	1	46.51	235-4400	330-2600	475	4065	13.79	19.43	.710	Ala	Ss,Si,Cg,Tc	20.80	.0220	.0010●	.....	.2010	.2010	.1980	N
De Soto	Firedome S19	V	IH	8-3 5/16 x3 1/4	276.1	7.50	N	CI	2	1	42.05	170-4400	255-2100	475	3750	15.39	25.00	.616	Ala	Ts,Cg,Sb,Si,Tc	18.30	.0225	.0010	.....	.1890	.1890	.1880	N
	Powermaster S20	IL	L	6-3 7/16 x4 1/2	250.6	7.00	N	CI	1	2	28.36	116-3600	208-1600	475	3590	16.32	35.26	.463	Ala	Us,Cg,Tc	18.50	.0305	.0007■	.....	.1780	.1780	.1780	.178
Dodge	Meadowbrook D50-1	V	IH	8-3 7/16 x3 1/4	241.3	7.10[15]	N	CI	1	2	37.80	140-4400[16]	220-2000[17]	475	3390	16.12	27.79[4]	.580[37]	Ala	Ts,Cg,Sb,Si,Tc	16.40	.0220	.0013	.....	.1830	.1830	.1880	N
	Coronet D50, D53, Royal D50, D53	V	IH	8-3 7/16 x3 1/4	241.3	7.50	N	CI	1	2	37.80	150-4400	222-2100	475	3405	16.18	26.03	.622	Ala	Ts,Cg,Sb,Si,Tc	16.40	.0220	.0013	.....	.1830	.1830	.1880	N
	Meadowbrook D51, Coronet D51, D52	IL	L	6-3 1/4 x4 5/8	230.2	7.25	N	CI	1	2	25.35	110-3600	190-1600	475	3195	16.05	33.59	.478	Ala	Us,Cg,Tc	16.00	.0305	.0007■	.....	.1690	.1690	.1720	.172
Ford	Mainline, Customline, Crestline	IL	IH	6-3.62x3.60	223.0	7.20	N	CI	2	1	31.50	115-3900	193-1600	490	3142	16.33	31.67	.516	Ala	Au,Cg,Fh,Tc	19.22	.0237	.0017	.0008	.2016	.2016	.2046	N
	Mainline, Customline, Crestline	V	IH	8-3 1/2x3.10	239.0	7.20	N	CI	2	1	39.20	130-4200	214-2000	490	3263	15.74	28.95	.544	Ala	Au,Cg,Fh,Tc	17.78	.0237	.0017	.0008	.1931	.1931	.1981	N
Henry J	Corsair 543	IL	L	4-3 1/2x4 3/8	134.2	7.00	N	CI	2	1	15.63	68-4000	109-1800	550	2405	21.65	42.72	.507	Ala	Ov,T,Tc	12.70	.0180	.0030	.0030	.1600	.1600	.1700	N
	Corsair Deluxe 544	IL	L	6-3 1/16 x3 1/2	161.0	7.00	N	CI	2	1	23.40	80-3800	133-1600	500	2455	18.35	36.94	.497	Ala	Ov,T,Tc	10.80	.0195	.0021	.0021	.1600	.1600	.1700	N
Hudson	Jet 1D, 2D, 3D	IL	L	6-3x4 3/8	202.0	7.50	8.00	CI	2	1	21.60	101-4000[18]	158-1400[21]	550	2675	15.72	30.53[5]	.515[38]	Ala	Vr,Cg	10.13	.0260	.0020	.0015	.1740	.1740	.1560	.156
	Wasp 4D	IL	L	6-3 5/8 x3 7/8	232.0▲	7.00	7.50	CI	2	1	30.45	126-4400	178-2400	550	3440	16.98	31.27	.513	Ala	Vr,Cg	18.00	.0260	.0025	.0015	.2010	.2010	.2010	.201
	Super Wasp 5D	IL	L	6-3 5/8 x4 3/8	262.0	7.00	7.50	CI	2	1	30.45	140-4000[19]	214-1600[22]	550	3525	15.36	28.75[6]	.531[39]	Ala	Vr,Cg	18.00	.0285	.0025	.0015	.2010	.2010	.2010	.201
	Hornet 70	IL	L	6-3 1/2x4 1/2	308.0	7.50	N	Al	2	1	34.88	160-3800[20]	264-1800[23]	550	3620	13.38	25.75[7]	.519[1]	Ala	Vr,Cg	18.56	.0285	.0025	.0015	.2090	.2090	.2090	.209
Kaiser	Special K545	IL	L	6-3 1/8 x4 3/8	226.2	7.30	N	CI	2	1[24]	26.30	118-3650	200-1800	500[25]	3210	16.40	31.44	.522	Ala	Ov,T,Tc	15.31	.0250	.0012	26	.1760	.1760	.1820	.182
	Manhattan K542	IL	L	6-3 1/8 x4 3/8	226.2	7.30	N	CI	2	1[24]	26.30	140-3800	215-2600	500[25]	3275	16.89	26.96	.619	Ala	Ov,T,Tc	15.31	.0250	.0012	26	.1760	.1760	.1820	.182
Lincoln		V	IH	8-3.80x3 1/2	317.0	8.00	N	CI	2	1	46.20	205-4200	305-2650	415D	4190	14.79	22.88	.647	Ala	Au,Si,El,Fh,Tc	22.90	.0250	.0010‡	.....	.2140	.2140	.2080	N
Mercury		V	IH	8-3.62x3.10	256.0	7.50	N	CI	2	1	42.05	161-4400	238-2500	490	3480	15.55	24.72	.629	Ala	Au,So,Cg,Fh,Tc	13.12	.0220	.0017	.0009	.2016	.2046	.2016	N
Nash	Metropolitan 541, 542	IL	IH	4-2 1/2x3 1/2	73.2	7.20	N	CI	2	2	10.63	42-4500	62-2400	500	1825	26.30	43.45	.574	Al	Sp,An	7.50	.0150	.0220	.0012	.1190	.1190	.1190	.124
	♦Rambler 5410	IL	L	6-3 1/8 x4	184.0	7.25	7.50	CI	2	2	23.44	85-3800	150-1600	500[27]	2550	16.58	35.88	.462	Ala	Ne,Tc	13.40	.0185	.0015	.0019	.1690	.1690	.1730	.173
	♦♦Rambler 5410	IL	L	6-3 1/8 x4 1/4	195.6	7.30	7.50	CI	2	2	23.44	90-3800	150-1600	500[27]	2665	16.18	35.17	.460	Ala	Ne,Tc	13.59	.0185	.0015	.0019	.1690	.1690	.1730	.173
	Statesman 5140	IL	L	6-3 1/8 x4 1/4	195.6	8.50	.....	Al	2	2	23.44	110-4000	155-2000	500[27]	3045	18.12	32.23	.562	Ala	Ne,Tc	13.59	.0185	.0015	.0019	.1690	.1690	.1730	.173
	‡Ambassador 5460	IL	IH	6-3 1/2x4 5/8	252.6	7.60	8.00	CI	2	2	29.40	130-3700	220-1600	500[27]	3430	15.56	30.23	.515	Ala	Ne,Tc	19.57	.0225	.0018	.0021	.1868	.1868	.1923	.182
Oldsmobile	88	V	IH	8-3 7/8 x3 1/16	324.3	8.25	N	CI	1	2	48.00	170-4000	300-2000	425[28]	3719	13.01	24.82	.524	Ala	Au,Cg,Tc,Ss	21.70	.0290	.0010	.0008	.2030	.2030	.1980	N
	Super 88, 98	V	IH	8-3 7/8 x3 7/16	324.3	8.25	N	CI	1	2	48.00	185-4000	300-2000	425[28]	3780	13.20	23.14	.570	Ala	Au,Cg,Tc,Ss	21.70	.0290	.0010	.0008	.2030	.2030	.1980	N
Packard	Clipper 5400	IL	L	8-3 1/16 x3 3/4	288.0	7.70	N	CI	2	1	39.20	150-4000	260-2200	425[29]	3585	14.18	27.23	.521	Ala	Au,Sp,Tc	19.58	.0300	.....	.0008	.1700	.1700	.1860	N
	Clipper 5401, 5411	IL	L	8-3 1/16 x4 1/4	327.0	8.00	N	CI	2	1	39.20	165-3600	295-2200	425[29]	3660	12.72	25.21	.505	Ala	Au,Sp,Tc	19.58	.0300	.....	.0008	.1700	.1700	.1860	N
	Cavalier 5402	IL	L	8-3 1/16 x4 1/4	327.0	8.00	N	CI	2	1	39.20	185-4000	310-2200	425[29]	3695	12.83	22.68	.566	Ala	Au,Sp,Tc	19.58	.0300	.....	.0008	.1700	.1700	.1860	N
	Packard 5406, 5426, 5431	IL	L	8-3 5/8 x4 1/2	359.0	8.70	N	Al	2	1	40.60	212-4000	330-2200	425[29]	3955	12.41	21.01	.591	Ala	Au,Sp,Tc	19.75	.0295	.....	.0008	.1910	.1910	.1890	N
Plymouth	P25-1, 2, 3 (Early Models)	IL	L	6-3 1/4 x4 3/8	217.8	7.10	N	CI	1	2	25.35	100-3600	177-1600	475	3004	16.09	35.04	.459	Al	Us,Cg,Tc	16.00	.0300	.0007■	.....	.1690	.1690	.1720	.172
	P25-1, 2, 3 (Late Models)	IL	L	6-3 1/4 x4 3/8	230.2	7.25	N	CI	1	2	25.35	110-3600	190-1600	475	3004	15.22	31.85	.478	Al	Us,Cg,Tc	16.00	.0300	.0007■	.....	.1690	.1690	.1720	.172
Pontiac	Chieftain 6-5425	IL	L	6-3 7/8 x4	239.2	7.00	7.70▼	CI	1	2	30.46	115-3800[30]	193-2000[32]	530[34]	3391	16.27	33.83[8]	.481[2]	Ala	Cg,As,Tc	20.07	.0265	.0008	.0008	.1885	.1885	.1885	N
	Chieftain 8-5427, Star Chief 5428	IL	L	8-3 5/8 x3 3/4	268.4	6.80	7.70▼	CI	1	2	36.45	122-3800[31]	226-2200[33]	465[35]	3451	14.72	32.39[9]	.455[3]	CI	Cn	26.70	.0220	.0015	.0015	.1615	.1615	.1920	N
Studebaker	Champion 15G	IL	L	6-3x4	169.6	7.50	N	CI	2	1[36]	21.60	85-4000	138-2100	550	2745	19.13	38.18	.501	Lyn	Cg,T	9.14	.0173	SF	.....	.1635	.1485	.1685	N
	Commander 5H, 5HY	V	IH	8-3 5/8 x3 1/4	232.6	7.50	N	CI	2	1[36]	36.40	127-4000	202-2000	550	3105	15.50	30.04	.546	Lyn	Cg,T	13.70	.0193	SF	.....	.1843	.1843	.1917	N
Willys	Ace, Eagle 6-226	IL	L	6-3 1/8 x4 3/8	226.2	7.30	N	CI	2	1	26.33	115-3650	190-1800	500[25]	2778	14.49	28.50	.508	Ala	Sb,T,Tc,Cg	15.30	.0250	.0012	26	.1891	.1891	.1931	.193
	Ace, Eagle, Lark 685B	IL	F	6-3 1/4 x3 1/2	161.0	7.60	8.10§	CI	2	1	23.44	90-4200	135-1800	600	2808	17.44	31.20	.559	Ala	TB	11.00	.0200	.0010	26	.1620	.1620	.1720	N

ABBREVIATIONS

*—Compression ratio change not obtained with optional head, but with changes in cylinder head gasket on Series 50 and 60. On Series 40 models, ratio change is made with piston change on Dynaflow equipped cars only.
†—Measured 1.29" from top of piston.
■—Measured ¾ of the way from the bottom.
●—Measured at center.
▲—262 cubic inch engine optional.
▲▲—Optional engine used with Hydramatic.
‡—Measured 1½" from bottom of piston.
♦—195.6 cubic inch engine used when equipped with Hydramatic.
‡—Le Mans Dual Jetfire engine with 8.00 compression ratio, 140-4000 horsepower and 220-1600 torque optional.
▼—Used with Hydramatic.
#—Shipping weight plus 500 lbs. for passengers, oil, water and gasoline.
§—Used over 5,000 ft. altitude only.
1—.552 with twin carburetors.
2—.493 with Hydramatic.
3—.473 with Hydramatic.
4—25.93 with Gyromatic or Powerflite.
5—29.95 with optional head and single carburetor; 27.85 with twin carburetors.
6—27.01 with twin carburetors.
7—24.24 with twin carburetors.
8—32.97 with Hydramatic.
9—31.11 with Hydramatic.
10—125-4000 with Powerglide.
11—425 (in drive) with Powerglide.
12—29.68 with Powerglide.
13—.531 with Powerglide.
14—16.82 with Dynaflow.
15—7.50 with Gyromatic or Powerflite.
16—150-4400 with Gyromatic or Powerflite.
17—222-2400 with Gyromatic or Powerflite.
18—106-4000 with optional head and single carburetor; 114-4000 with twin carburetors.
19—149-4000 with twin carburetors.
20—170-4000 with twin carburetors.
21—168-2400 with twin carburetors.
22—226-2600 with twin carburetors.
23—278-2600 with twin carburetors.
24—Two with Hydramatic.
25—450 with Hydramatic.
26—Selective fit; 5 to 10 lb. pull on .0015" feeler stock, ½" wide.
27—375 with Hydramatic.
28—400 with Hydramatic (in drive).
29—375 with Ultramatic.
30—118-3800 with Hydramatic.
31—127-3800 with Hydramatic.
32—197-2000 with Hydramatic.
33—234-2200 with Hydramatic.
34—375 with Hydramatic.
35—375 with Hydramatic.
36—Two with Automatic Drive.
37—.622 with Gyromatic or Powerflite.
38—.525 with optional head and single carburetor; .564 with twin carburetors.
39—.569 with twin carburetors.
Al—Aluminum.
Ala—Aluminum alloy.
Als—Aluminum alloy with steel struts.
An—Anodized.
As—Autothermic steel strut.
Au—Autothermic.
CAl—Cast alloy iron.
Ce—Controlled expansion.
Cg—Cam ground.
CI—Cast iron.
Cn—Chrome nickel alloy, electro tin plated.
D—In drive range.
El—Elliptical.
F—"F" head, valves in side and head.
Fh—Flat head.
IH—In head.
IL—In line.
L—"L" head, valves at side.
Lyn—Lynite.
N—No or none.
Ne—Nelson design.
Nu—In neutral.
Ov—Oval ground.
Sb—Steel band.
SF—Selective feeler fit.
Sl—Slipper type.
So—Solid skirt.
Sp—Split skirt.
Ss—Steel strut.
St—Stannate coated.
T—"T" slot.
TB—Tin or brass plated.
Tc—Tin coated.
Ts—Transverse slot.
Us—"U" slot.
V—"V" type engine.
Vr—"V" rib type.

PISTON RINGS, PISTON PINS, AND CONNECTING RODS

PASSENGER CAR MAKE AND MODEL	Bore	PISTON RINGS															PISTON PIN									CONNECTING RODS					
		Type—Oil or Compression				No. Rings Above Piston Pin	Compression					Oil					Location of Expanders				Type			Clearance		Direction Offset in Piston				Bearing			
		No. 1	No. 2	No. 3	No. 4		Material	Coating	Width	Gap	Maximum Wall Thickness	Material	Coating	Width	Gap	Maximum Wall Thickness		Material	Length	Diameter	Locked in—	Bushing Location	Bushing Material	In Piston	In Rod		Material	Weight (oz.)	Length (center to center)	Material	Type (cast or removable)	Effective Length	Clearance	End Play
Buick	3 5/8	C	C	O	N	3	CI	Lub	.0780	.015	.181	St	N	.1860	.025	.135	OR	1117	3.1000	.9400	R	N	.....	.0004	N	N	SF	22.16	6	Dur	Re	.8810	.0012	.007
.....40	4	C	C	O	N	3	CI	Lub	.0780	.015	.200	St	N	.1860	.025	.135	OR	1117	3.4000	.9400	R	N	.....	.0004	N	N	SF	22.16	6	Dur	Re	.8810	.0012	.007
Cadillac	3 13/16	C	C	O	N	3	(a)	(b)	.0781	.015	(c)	CI	Lub	.1875	.015	.150	N	St	3.0930	1.0000	R	N	.....	.0001	N	TM	St	23.49	6 5/8	Mor	Re	.8959	.0013	.011*
.....60, 62, 75																																	
Chevrolet	3 7/8	C	C	O	N	3	CI	WR	.0933	.012	.178	CI	N	.1863	.010	.141	OR	CS	3.2130	.8663	R	N	.....	.0002	N	TM	DFS	30.88	6 13/16	Bsb	Re	.9980	.0018	.009
.....1500, 2100, 2400	3 7/8	C	C	O	N	3	CI	(d)	.0933	(e)	.178	CI	N	.1863	.010	.141	OR	CS	3.2130	.8663	R	N	.....	.0002	N	Ri	DFS	30.88	6 13/16	Bb	Re	.9980	.0018	.009
.....2900																																	
Chrysler	3 7/16	C	C	O	O	4	PI	(f)	.0938	.015	.172	PI	N	.1563	.015	.155	N	HMS	2.8750	.8594	F	R	BS	.0003	.0003	N	HMFS	32.40	7 1/8	Bsb	Re	1.0600	.0010	.009
.....C62	3 13/16	C	C	O	O	4	PI	T	.0781	.015	.191	PI	N	.1875	.015	.150	OR	HMS	3.1406	.9844	F	R	BS	.0003	.0003	Ri	HMFS	25.20	6 5/8	Bsb	Re	.8850	.0010	.010*
.....C63, C64, C66																																	
De Soto	3 5/8	C	C	O	N	3	PI	T	.0780	.015	.181	PI	N	.1860	.015	.145	OR	HMS	3.0650	.9220	F	R	Lbs	.0003	.0003	Ri	HMFS	22.80	6 1/16	Bsb	Re	.8125	.0010	.010*
.....S20	3 7/8	C	C	O	O	4	PI	(f)	.0938	.015	.172	PI	N	.1563	.015	.155	N	HMS	2.8700	.8594	F	R	Lbs	.0003	.0003	N	HMFS	32.40	7 1/8	Bsb	Re	1.0600	.0010	.009
Dodge	3 7/16	C	C	O	N	3	PI	T	.0780	.011†	.172	PI	N	.1860	.011	.140	OR	HMS	2.8850	.8592	F	R	BS	.0003	.0003	Ri	HMFS	21.20	5 13/16	Bsb	Re	.8110	.0010	.010*
.....D51, D52	3 1/4	C	C	O	O	4	PI	T	.0930	.011	.162	PI	N	.1550	.011	(g)	OR	HMS	2.7460	.8592	F	R	BS	.0003	.0003	N	HMFS	27.90	7 13/16	Bsb	Re	.9300	.0010	.009
Ford	3.62	C	C	O	N	3	CI	Cad	.0933	.015	.181	CI	N	.1863	.015	.132	OR	AS	3.0250	.9122	F	R	Br	.0002	.0002	Ri	SF	29.63	6 1/4	Bsb	Re	1.0040	.0013	.006
Henry J	3 1/2	C	C	O	N	3	CI	Cad	.0933	.015	.175	CI	N	.1863	.015	.142	OR	AS	2.9820	.9122	F	R	Br	.0002	.0002	Ri	SF	24.06	6 3/64	Csb	Re	.7110	.0016	.011*
.....543	3 1/8	C	C	O	N	3	CI	N	.0930	.011	.135	CI	N	.1863	.011	.140	N	St	2.7813	.8119	R	N	N	.0004	N	N	SF	40.00	9 3/16	Bsb	Re	1.0940	.0015	.007
.....544	3 1/8	C	C	O	N	3	CI	N	.0930	.011	.135	CI	N	.1863	.011	.140	N	St	2.6563	.7195	R	N	N	.0004	N	N	SF	22.20	6 3/32	Bsb	Re	.8990	.0015	.005
Hudson	3	C	C	O	O	3	CI	(h)	(i)	.007	.145	CI	Gr	(j)	.007	(k)	N	St	2.4375	.7500	F	R	.....	.0002	HPF	N	1041	24.00	8 1/16	.....	Re	.9620	.0020	.010
.....1D, 2D, 3D	3 1/8	C	C	O	O	3	CI	TC	.0780	.010	.178	CI	TG	(j)	.010	(l)	N	St	2.9370	.9680	F	R	.....	.0002	HPF	N	C1041	33.00	8 1/8	.....	Re	1.3780	.0010	.010
.....4D, 5D	3 13/16	C	C	O	O	3	CI	(f)	.0780	.010	.191	CI	TG	(j)	.010	(m)	N	St	2.9370	.9680	F	R	.....	.0002	HPF	N	C1041	33.00	8 1/8	.....	Re	1.3780	.0010	.010
.....7D																																	
Kaiser	3 5/8	C	C	O	O	4	CI	(6)	.0930	.012	.161	CI	N	.1548	.012	.147	N	HS	2.7800	.8592	F	R	Br	.0002	.0004	N	SF	29.60	7	Bsb	Re	1.0620	.0012	.009
.....K542	3 5/8	C	C	O	O	4	CI	(b)	.0930	.012	.161	CI	(n)	.1548	.012	.147	N	HS	2.7800	.8592	F	R	Br	.0002	.0004	N	SF	29.60	7	Bsb	Re	1.0620	.0012	.009
Lincoln	3.80	C	C	O	N	3	CI	(o)	.0778	.015	.191	CI	N	.1863	.015	.150	OR	AS	3.1745	.9122	F	R	Br	.0002	.0003	Ri	SF	28.36	7 1/16	Bsb	Re	.7890	.0012	.010*
Mercury	3.62	C	C	O	N	3	CI	(p)	.0933	.015	.181	CI	N	.1863	.015	.150	OR	AS	3.0250	.9122	F	R	Br	.0002	.0003	Ri	SF	24.05	6 3/4	Csb	Re	.7450	.0012	.011*
Nash	2 27/32	C	C	C	O	4	CI	Ox	.0775	.010	.104	CI	Ox	.1557	.010	.105	N	NAS	2.2760	.6245	R	N	.....	.0003	N	N	SF	24.80	6 3/4	Bsb	Re	.9030	.0020	.011
.....5410, 5440	3 1/4	C	C	O	O	4	Ir	(b)	.0933	.015	.156	(s)	(t)	(u)	(v)	(x)	N	St	2.7500	.8594	R	N	.....	.0002	N	Ri	DFS	25.00	6 5/8	Bsb	Re	.9595	.0015	.010
.....5460	3 1/2	C	C	O	O	4	Ir	(q)	.0933	(r)	.175	(s)	(t)	(u)	(w)	(y)	N	St	3.0000	.9375	F	R	Br	.0002	.0002	Ri	DFS	29.00	8 3/4	Bsb	Re	1.2720	.0015	.010
Oldsmobile	3 7/8	C	C	O	N	3	CI	(z)	.0780	(1)	.194	CI	N	.1863	(Z)	.159	OR	St	3.1250	.9805	F	R	Br	.0001	.0004	Ri	X1335	29.54	6 5/8	Dbs	Re	.8810	.0019	.007*
.....88, Super 88, 98																																	
Packard	3 1/2	C	C	O	N	3	Ir	Fer	.0930	.012	.160	Ir	NB	.1860	.011	.157	OR	St	3.0156	.8753	F	R	Br	PPF	FPF	N	SF	36.50	7 15/16	SC	Re	1.1406	.0015	.007
.....5401, 5411	3 1/2	C	C	O	N	3	Ir	Fer	.0930	.012	.160	Ir	NB	.1860	.011	.157	OR	St	3.0156	.8753	F	R	Br	PPF	FPF	N	SF	36.00	7 11/16	SC	Re	1.1406	.0015	.007
.....5402	3 1/2	C	C	O	N	3	Ir	(q)	.0930	.012	.160	Ir	NB	.1860	.011	.157	OR	St	3.0156	.8753	F	R	Br	PPF	FPF	N	SF	36.00	7 11/16	SC	Re	1.1406	.0015	.007
.....5406, 5426, 5431	3 1/16	C	C	O	N	3	Ir	(q)	.0780	.015	.173	Ir	NB	.1860	.015	.158	OR	St	3.0156	.8753	F	R	Br	PPF	FPF	N	SF	36.00	7 1/16	SC	Re	1.1406	.0015	.007
Plymouth	3 1/4	C	C	O	O	4	Ir	(f)	.0938	.012	.162	Ir	N	.1563	.012	.150	N	HMS	2.7500	.8594	F	R	BS	.0003	.0015	N	HMFS	31.10	7 13/16	Bsb	Re	.9300	.0010	.009
.....P25 (Early Models)	3 1/4	C	C	O	O	4	Ir	(f)	.0938	.012	.162	Ir	N	.1553	.012	.150	N	HMS	2.7500	.8594	F	R	BS	.0003	.0015	N	HMFS	27.90	7 13/16	Bsb	Re	.9300	.0010	.009
.....P25 (Late Models)																																	
Pontiac	3 5/16	C	C	O	N	3	CI	(3)	.0778	.012	.173	CI	TC	.1863	.010	.141	OR	HMS	3.0500	.9372	F	R	AB	.0001	.0005	Ri	HMFS	37.00	7 5/16	Bsb	Re	1.2188	.0011	.010
.....5427, 5428	3 3/8	C	C	O	N	2	CI	TC	.0933	.012	.148	CI	TC	.1863	.012	.153	N	HMS	2.8700	.9372	F	R	AB	PF	.0005	N	HMFS	31.80	7 5/16	Bsb	Re	1.0000	.0011	.010
Studebaker	3	C	C	O	N	3	CI	Fer	(4)	.012	(5)	CI	NB	.1563	.012	.139	OR	St	2.6250	.7500	R	N	.....	.0002	N	N	St	19.04	6 3/8	Bsb	Re	.8750	.0011	.007
.....5H, 5HY	3 3/8	C	C	O	N	3	CI	Grn	.0781	.012	.164	CI	Gr	.1875	.012	.137	OR	St	2.8750	.8750	R	N	.....	.0002	N	N	St	23.71	6 5/8	Bsb	Re	.8125	.0011	.010
Willys	3 5/8	C	C	O	O	4	CI	(6)	.0930	.012	.161	CI	.....	.1548	.012	.147	OR	HS	2.7790	.8592	F	R	Br	.0001	.0004	N	SF	29.60	7	Bsb	Re	1.0630	.0018	.006
.....685B	3 1/8	C	C	O	N	3	CI	(7)	.0938	.012	.144	CI	N	.1875	.012	.125	OR	1016	2.6563	.7497	R	N	.....	.0002	N	N	1141	22.20	6 11/32	Bsb	Re	.8690	.0013	.007

ABBREVIATIONS

*—Total for two rods.
†—.012 for Muskegon rings.
(a)—Upper, steel; lower, cast iron.
(b)—Upper, chrome; lower, lubrite.
(c)—Upper, .165; lower, .184.
(d)—Upper, chrome; lower, wear resistant.
(e)—Upper, .015; lower, .012.
(f)—Upper, chrome; lower, tin.
(g)—Upper, .137; lower, .150.
(h)—Upper, chrome; lower, granoseal.
(i)—Upper, .0778; lower, .0780.
(j)—Upper, .1863; lower, .1548.
(k)—Upper, .134; lower, .130.
(l)—Upper, .158; lower, .142.
(m)—Upper, .165; lower, .151.
(n)—Upper, lubrite; lower, tin plated.
(o)—Upper, chrome; lower, ferrox coated or cadmium plated.
(p)—Upper, chrome; lower, ferrox or phosphate coated.
(q)—Upper, chrome; lower, ferrox.
(r)—Upper, .011; lower, .010.
(s)—Upper, iron; lower, steel.
(t)—Upper, ferrox; lower, lubrite.
(u)—Upper, .1548; lower, .1545.
(v)—Upper, .015; lower, .007.
(w)—Upper, .012; lower, .007.
(x)—Upper, .144; lower, .155.
(y)—Upper, .157; lower, .155.
(z)—Upper, chrome; lower, Perfect Circle, lubrite; Sealed Power, granoseal.
(1)—Sealed Power, .012; Perfect Circle, .015.
(2)—Sealed Power, .012; Perfect Circle, .018.
(3)—Upper, chrome; lower, tin or cadmium.
(4)—Upper, .0938; lower, .1250.
(5)—Upper, 150; lower, .135.
(6)—Upper chrome plated.
(7)—Upper, chrome plated; lower, plain.
AB—Aluminum bronze.
AS—Alloy steel.
Bb—Babbitt. **Br**—Bronze.
BS—Bronze on steel.
Bsb—Babbitt, steel backed.
C—Compression.
Cad—Cadmium plate.
CI—Cast iron. **CS**—Chromium steel.
Csb—Copper lead, steel backed.
Dbs—Durex with babbitt overlay, steel backed.
DFS—Drop forged steel.
Dur—Durex.
F—Floating. **Fer**—Ferrox.
FPF—Finger push fit.
Gr—Granoseal.
HMFS—High manganese forging steel.
HMS—High manganese steel.
HPF—Hand push fit at 70°F.
HS—Hardened steel.
Ir—Iron.
Lbs—Lead bronze, steel backed.
Lub—Lubrite. **N**—No or none.
NAS—Nickel alloy steel.
Mor—Moraine. **NB**—None or blued.
O—Oil. **OR**—Oil ring.
Ox—Oxidized.
PF—Press fit.
PI—Piston ring iron.
PPF—Palm push fit at 160° in water.
PuF—Push fit.
R—Rod.
Re—Removable.
Ri—Right.
SC—Special composite construction.
SF—Steel forging.
T—Tin.
TC—Tin or cadmium.
TG—Tin or granoseal.
TM—Toward maximum thrust side.
WR—Wear resistant.

(g)—Upper, .137; lower, .150.
(h)—Upper, chrome; lower, granoseal.
(i)—Upper, .0778; lower, .0780.
(j)—Upper, .1863; lower, .1548.
(s)—Upper, iron; lower, steel.
(t)—Upper, ferrox; lower, lubrite.
(u)—Upper, .1548; lower, .1545.
(v)—Upper, .015; lower, .007.
(4)—Upper, .0938; lower, .1250.
(5)—Upper, 150; lower, .135.
(6)—Upper chrome plated.
Dbs—Durex with babbitt overlay, steel backed.
DFS—Drop forged steel.
Dur—Durex.
NAS—Nickel alloy steel.
Mor—Moraine.
O—Oil.
Ox—Oxidized.
NB—None or blued.
OR—Oil ring.
TC—Tin or cadmium.
TG—Tin or granoseal.
TM—Toward maximum thrust side.
WR—Wear resistant.

CRANKSHAFTS, CAMSHAFTS AND BEARING DIMENSIONS

PASSENGER CAR MAKE AND MODEL	CRANKSHAFT															CAMSHAFT								
						Main Bearing											Bearings		Type of Drive			Timing Chain			
									Journal Diameter and Bearing Effective Length															
	Material	Weight (lb.)	Vibration Dampener Type	End Thrust Taken Up by Bearing	Crankshaft End Play	Material	Type (cast or removable)	Clearance	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	Connecting Rod Journal Crankpin Diameter	Material	Material	Number	Gear or Chain	Crankshaft Gear or Sprocket Material	Camshaft Gear or Sprocket Material	Make	No. of Links	Width	Pitch
Buick 40	SF	56.70	N	5	.0060	Dsb	Re	.0018	2.4985x1.2200	2.4985x1.2500	2.4985x1.2500	2.4985x1.2500	2.4985x1.7650	None	None	2.2495	SF	Bsb	5	Ch	1140	CI	LB	52	.6880	.500
..... 50, 60, 70	SF	56.70	RA	5	.0060	Dsb	Re	.0018	2.4985x1.2200	2.4985x1.2500	2.4985x1.2500	2.4985x1.2500	2.4985x1.7650	None	None	2.2495	SF	Bsb	5	Ch	1140	CI	LB	52	.6880	.500
Cadillac 60, 62, 75	St	61.50	RA	5	.0030	Dur	Re	.0017	2.5000x .9070	2.5000x .9070	2.5000x .9070	2.5000x .9070	2.5000x1.6220	None	None	2.2500	CI	Bsb	5	Ch	St	St	LB	46	.6875	.500
Chevrolet 1500, 2100, 2400, 2900	DFS	78.50	Osc	3	.0065	Bsb	Re	.0015	2.6840x1.3594	2.7150x1.2500	2.7460x1.2490	2.7770x2.0000	None	None	None	2.3115	CAI	Bsb	4	G	St	(e)	N	....	.....	....
Chrysler C62	DFS	NA	DDT	4	.0050	Bsb	Re	.0010	2.5000x1.1550	2.5000x1.1550	2.5000x1.1550	2.5000x1.5890	None	None	None	2.1250	SCI	Bsb*	4	Ch	HMS	CI	.....	48	1.0000	.500
..... C63, C64, C66	DFS	NA	DDT	3	.0045	Bsb	Re	.0010	2.5000x .8750	2.5000x .8750	2.5000x .8700	2.5000x .8750	2.5000x1.5950	None	None	2.2500	SCI	Bsb	5	Ch	HMS	CI	.....	68	1.1250	.375
De Soto S19	DFS	NA	DDT	3	.0045	Bsb	Re	.0010	2.3750x .8120	2.3750x .8120	2.3750x .8070	2.3750x .8120	2.3750x1.5320	None	None	2.0620	SCI	Bsb	5	Ch	HMS	CI	.....	68	1.1250	.375
..... S20	DFS	NA	DDT	4	.0050	Bsb	Re	.0010	2.5000x1.1550	2.5000x1.1550	2.5000x1.1550	2.5000x1.5890	None	None	None	2.1250	SCI	Bsb*	4	Ch	HMS	CI	.....	48	1.0000	.500
Dodge D50, D53	DFS	NA	N	3	.0045	Bsb	Re	.0010	2.3750x .8220	2.3750x .8220	2.3750x .8020	2.3750x .8220	2.3750x1.5320	None	None	1.9375	CI	Bsb	5	Ch	HMS	CI	.....	68	1.1250	.375
..... D51-1, D52	DFS	NA	N	4	.0050	Bsb	Re	.0010	2.5000x1.2040	2.5000x1.0000	2.5000x1.0000	2.5000x1.5890	None	None	None	2.0625	CI	Bsb*	4	Ch	HMS	CI	.....	48	1.0000	.500
..... D51-2	DFS	NA	DDT	4	.0050	Bsb	Re	.0010	2.5000x1.2040	2.5000x1.0000	2.5000x1.0000	2.5000x1.5890	None	None	None	2.0625	CI	Bsb*	4	Ch	HMS	CI	.....	48	1.0000	.500
Ford	AI	68.25	RFV	3	.0060	Bsb	Re	.0013	2.4980x1.0700	2.4980x1.0700	2.4980x1.0740	2.4980x1.2950	None	None	None	2.2984	CAI	Bsb	4	Ch	CI	CI	LM	56	1.0000	.375
.....	AI	49.50	N	3	.0040	Bsb	Re	.0013	2.4980x .8770	2.4980x .8770	2.4980x .8410	2.4980x .8770	2.4980x .8770	None	None	2.1884	CAI	Bsb	5	Ch	CI	CI	LM	56	1.0000	.375
Henry J 543	SF	46.50	N	1	.0060	Bsb	Re	.0019	2.3336x1.6400	2.3336x1.7188	2.3336x1.6560	None	None	None	None	1.9380	CI	Bsb	1	G	CI	BFS	N	....	.....	....
..... 544	SF	49.30	SPR	1	.0060	Bsb	Re	.0020	2.2500x1.0050	2.2500x .9720	2.2500x .9720	2.2500x1.3160	None	None	None	1.8745	CI	Bsb	1	G	CI	BFS	N	....	.....	....
Hudson 1D, 2D, 3D	1045	77.13	Rub	3	.0060	.....	Re	.0010	2.4995x1.3125	2.4995x1.2500	2.4995x1.4955	2.4995x1.5000	None	None	None	1.9375	CI	.....	4	Ch	St	CI	Mor	60	1.0000	.375
..... 4D	1045	80.50	Rub	3	.0060	.....	Re	.0010	2.4995x1.4375	2.4995x1.3750	2.4995x1.6250	2.4995x1.7500	None	None	None	2.1250	CI	.....	4	Ch	St	CI	Mor	60	1.2500	.375
..... 5D	1045	85.50	Rub	3	.0060	.....	Re	.0010	2.4995x1.4375	2.4995x1.3750	2.4995x1.6250	2.4995x1.7500	None	None	None	2.1250	CI	.....	4	Ch	St	CI	Mor	60	1.2500	.375
..... 7D	1045	87.50	Rub	3	.0060	.....	Re	.0010	2.4995x1.4375	2.4995x1.3750	2.4995x1.6250	2.4995x1.7500	None	None	None	2.1250	CI	.....	4	Ch	St	CI	Mor	60	1.2500	.375
Kaiser K542, K545	SF	77.00	Vis	4	.0040	Bsb	Re	.0014	2.3750x1.0620	2.3750x1.2500	2.3750x1.2500	2.3750x1.3210	None	None	None	2.0623	CF	Bsb	4	Ch	St	CI	LM	46	1.0000	.500
Lincoln	AI	62.00	RF	3	.0060	Bsb	Re	.0017	2.6239x .9200	2.6239x .9200	2.6239x .8400	2.6239x .9200	2.6239x1.6400	None	None	2.2486	CAI	Bsb	5	Ch	CS	CI	LB	50	1.2500	.500
Mercury	AI	48.50	N	3	.0040	Bsb	Re	.0013	2.4985x .9100	2.4985x .9100	2.4985x .9100	2.4985x .9100	2.4985x .9100	None	None	2.1884	AI	Bsb	5	Ch	CI	CI	LM	56	1.0000	.375
Nash 541, 542	SF	24.00	N	2	.0050	Bsb	Re	.0014	1.8752x1.3750	1.8752x1.3750	1.8752x1.3750	None	None	None	None	1.7502	SF	Bsb	3	Ch	SCI	SCI	Ren	52	.9000	.375
..... 5410, 5440	DFS	65.50	Ruf	1	.0050	Bsb	Re	.0018	2.4844x1.1563	2.4844x1.1250	2.4844x1.1250	2.4844x1.5313	None	None	None	2.0947	CI	Bsb	4	Ch	St	.....	Mor	60	1.0000	.375
..... 5460	DFS	70.50	Ruf	4	.0050	Bsb	Re	.0014	2.4844x1.2500	2.4844x .9375	2.4844x .9375	2.4844x1.7500	2.4844x .9375	2.4844x .9375	2.4844x1.6250	2.0007	CI	Bsb†	4	Ch	St	.....	Mor	60	1.0000	.375
Oldsmobile 88	St	57.75	N	5	.0060	Dbs	Re	(a)	2.5000x1.1250	2.5000x1.1250	2.5000x1.1250	2.5000x1.1250	2.6250x1.8800	None	None	2.2500	CI	Bcb	5	Ch	St	CI	LM	(b)	(c)	(d)
..... Super 88	St	57.75	Rub	5	.0060	Dbs	Re	(a)	2.5000x1.1250	2.5000x1.1250	2.5000x1.1250	2.5000x1.1250	2.6250x1.8800	None	None	2.2500	CI	Bcb	5	Ch	St	CI	LM	(b)	(c)	(d)
..... 98	St	57.75	RA	5	.0060	Dbs	Re	(a)	2.5000x1.1250	2.5000x1.1250	2.5000x1.1250	2.5000x1.1250	2.6250x1.8800	None	None	2.2500	CI	Bcb	5	Ch	St	CI	LM	(b)	(c)	(d)
Packard 5400	SF	96.00	FS	3	.0060	SC	Re	.0015	2.7465x1.2188	2.7465x1.0625	2.7465x1.5938	2.7465x1.0625	2.7465x2.0625	None	None	2.2500	CI	SC	5	Ch	St	CI	Mor	58	1.0000	.375
..... 5401, 5402, 5411	SF	104.00	FS	3	.0060	SC	Re	.0015	2.7465x1.2188	2.7465x1.0625	2.7465x1.5938	2.7465x1.0625	2.7465x2.0625	None	None	2.2500	CI	SC	5	Ch	St	CI	Mor	58	1.0000	.375
..... 5406, 5426, 5431	SF	107.00	FS	5	.0060	SC	Re	.0015	2.7465x1.2188	2.7465x1.0625	2.7465x1.0625	2.7465x1.0625	2.7465x1.5938	2.7465x1.0625	2.7465x1.0625‡	2.2500	CI	SC	5	Ch	St	CI	Mor	58	1.0000	.375
Plymouth P25	DFS	NA	N	4	.0050	Bsb	Re	.0010	2.5000x1.2040	2.5000x1.0000	2.5000x1.0000	2.5000x1.5890	None	None	None	2.0625	SCI	Bsb*	4	Ch	HMS	CI	.....	48	1.0000	.500
Pontiac 5425	DFS	86.80	HB	3	.0055	Bsb	Re	.0013	2.5000x1.2500	2.5313x1.1875	2.5938x1.1250	2.6250x1.5625	None	None	None	2.1250	DFS	Bsb	4	Ch	CHS	AIC	Mor	56	1.0000	.375
..... 5427, 5428	DFS	81.40	HB	4	.0055	Bsb	Re	.0013	2.3750x1.2500	2.4063x1.1875	2.4375x1.4375	2.4688x1.1250	2.6250x1.5625	None	None	2.0000	DFS	Bsb	5	Ch	CHS	AI	Mor	56	.8750	.375
Studebaker 15G	DFS	47.50	RMD	1	.0045	Bsb	Re	.0013	2.4375x1.0000	2.4375x1.0938	2.4375x1.0938	2.4375x1.5000	None	None	None	1.8125	CAI	Bsb	4	G	CI	BFS	N	....	.....	....
..... 5H, 5HY	DFS	52.75	RMD	1	.0045	Bsb	Re	.0013	2.5000x1.0000	2.5000x .8750	2.5000x .8750	2.5000x .8750	2.5000x1.5156	None	None	2.0000	CAI	Bsb	5	G	CI	BFS	N	....	.....	....
Willys 6-226	SF	77.00	Vis	4	.0040	Bsb	Re	.0014	2.3750x1.0620	2.3750x1.2500	2.3750x1.2500	2.3750x1.3210	None	None	None	2.0623	SF	Bsb	4	Ch	St	CI	LM	46	1.0000	.500
..... 685B	1040	49.32	DDT	1	.0050	Bsb	Re	.0017	2.2500x1.0000	2.2500x .9688	2.2500x .9688	2.2500x1.3125	None	None	None	1.9375	CAI	Bsb	4	G	CI	BFS	N	....	.....	....

ABBREVIATIONS

*—No. 4 bearing is of cast iron.
†—No. 1 bearing is of cast iron.
‡—No. 8, 2.7465x1.0625; No. 9, 2.7465x 2.0625.
(a)—All except rear, .0018; rear only, .0019.
(b)—Link Belt, 48; Morse, 64.
(c)—Link Belt, .8438; Morse, .8750.
(d)—Link Belt, .500; Morse, .375.
(e)—Bakelite on all models except Powerglide which is aluminum.
AI—Alloy iron.
AIC—Alloy iron, cyanide hardened.
Bcb—Babbitt or copper lead bronze, steel backed.
BFS—Bakelite and fabric composition with steel hub.
Bsb—Babbitt, steel backed.
CAI—Cast alloy iron.
CF—Cast iron or steel forging.
Ch—Chain.
CHS—Carburized and hardened steel.
CI—Cast iron.
CS—Cast steel.
Dbs—Durex with babbitt overlay, steel backed.
DDT—Damped dynamic torsional vibration absorber.
DFS—Drop forged steel.
Dsb—Durex, steel backed.
Dur—Durex.
FS—Fluid suspension.
G—Gear.
HB—Harmonic balancer.
HMS—High manganese steel.
LB—Link Belt.
LM—Link Belt or Morse.
Mor—Morse.
N—No or none.
NA—Not available.
Osc—Oscillating (rubber floating).
RA—Rubber absorption.
Re—Removable.
RF—Rubber floated.
Ren—Renold.
RFV—Rubber floated or viscous.
RMD—Rubber mounted disc.
Rub—Rubber.
Ruf—Rubber and friction.
SC—Special composite construction.
SCI—Special cast iron.
SF—Steel forging.
SPR—Steel plate, rubber cushioned.
St—Steel.
Vis—Viscous.

VALVE DATA

PASSENGER CAR MAKE AND MODEL	Hydraulic Lifters	Special Provision for Valve Rotation (Intake or Exhaust)	Rocker Ratio—to-1	INTAKE												EXHAUST											
							Seat		Stem			Springs							Seat		Stem			Springs			
												Pressure (lb)		Length (in)									Pressure (lb)		Length (in)	
				Material	Overall Length	Actual Overall Head Diameter	Angle (Deg.)	Insert Material	Diameter (In.)	Guide Clearance	Lift (In.)	Valve Closed	Valve Open	Valve Closed	Valve Open	Material	Overall Length	Actual Overall Head Diameter	Angle (Deg.)	Insert Material	Diameter (In.)	Guide Clearance	Lift (In.)	Valve Closed	Valve Open	Valve Closed	Valve Open
Buick	Y	N	1.500	NCS	4.704	1.750	45	N	.3720	.0023	.358	43.0*	88.0*	1.500*	1.142*	(a)	4.704	1.250	45	N	.3714	.0030	.350	43.0†	87.0†	1.500†	1.150†
50, 60, 70	Y	N	1.500	NCS	4.704	1.750	45	N	.3720	.0025	.378	43.0*	91.0*	1.500*	1.120*	(a)	4.704	1.250	45	N	.3714	.0030	.350	43.0†	87.0†	1.500†	1.150†
Cadillac 60, 62, 75	Y	N	1.500	St	(b)	1.750	44	N	.3420	.0015	.365	61.0	140.0	1.696	1.326	(c)	4.656	1.562	44	N	.3418	.0018	.365	61.0	140.0	1.696	1.326
Chevrolet 1500, 2100, 2400	(f)	N	1.477	SNS	6.379	1.875	31	N	.3414	.0019	(g)	65.0	(h)	(i)	(j)	NCS	4.917	1.500	46	N	.3394	.0039	(k)	65.0	(h)	(i)	(j)
2900	N	N	1.477	SCS	6.379	1.875	31	N	.3414	.0019	.405	55.0▲	150.0▲	1.880▲	1.490▲	SCS	4.628	1.500	....	N	.3394	.0039	.414	55.0▲	150.0▲	1.880▲	1.490▲
Chrysler C62	N	N	N	SCS	4.844	1.718	45	N	.3410	.0020	.365	42.5	115.0	1.750	1.375	SCS	4.844	1.501	45	AI	.3400	.0030	.365	42.5	115.0	1.750	1.375
C63, C64, C66	Y	N	1.500	SCS	5.094	1.938	45	N	.3725	.0020	.378	55.0■	126.0■	1.688■	1.313■	SCS	5.094	1.750	45	AI	.3050	.0030	.361	55.0■	126.0■	1.688■	1.313■
De Soto S19	Y	N	1.500	SCS	4.859	1.750	45	N	.3725	.0020	.361	40.5●	105.0●	1.688●	1.313●	SCS	4.813	1.407	45	AI	.3715	.0030	.361	40.5●	105.0●	1.688●	1.313●
S20	N	N	N	SCS	4.844	1.718	45	N	.3410	.0020	.365	42.5	115.0	1.750	1.375	SCS	4.844	1.501	45	AI	.3400	.0030	.365	42.5	115.0	1.750	1.375
Dodge D50, D53	Y	N	1.500	SCS	4.813	1.656	45	N	.3725	.0020	.365	40.5♦	105.0♦	1.688♦	1.312♦	SCS	4.813	1.407	45	AI	.3715	.0030	.365	40.5♦	105.0♦	1.688♦	1.312♦
D51, D52	N	N	N	SCS	4.844	1.531	45	N	.3405	.0020	.365	42.5	115.0	1.750	1.375	SCS	4.844	1.407	45	AI	.3405	.0040	.365	42.5	115.0	1.750	1.375
Ford 6	N	Bo	1.424	SCS	5.020	1.780	45	N	.3420	.0015	.329	58.0	132.0	1.821	1.505	NCS	5.020	1.510	45	N	.3410	.0015	.325	58.0	132.0	1.821	1.505
8	N	Bo	1.427	SCS	5.020	1.647	45	N	.3415	.0015	.331	58.0	132.0	1.821	1.505	NCS	5.020	1.510	45	N	.3410	.0015	.331	58.0	132.0	1.821	1.505
Henry J 543	N	N	N	C3110	5.796	1.531	45	N	.3726	.0029	.351	53.0	120.0	2.109	1.750	St	5.813	1.468	45	N	.3715	.0035	.351	53.0	120.0	2.109	1.750
544	N	N	N	C3140	4.562	1.375	45	N	.3411	.0029	.284	50.0	105.0	1.625	1.328	St	4.562	1.281	45	N	.3400	.0035	.300	50.0	105.0	1.625	1.328
Hudson 1D, 2D, 3D	N	Bo	N	8615	4.965	1.500	45	N	.3417	.0020	.346	44.0	120.0	1.953	1.607	St	4.965	1.395	46	N	.3407	.0030	.346	44.0	120.0	1.953	1.607
4D, 5D, 7D	N	Bo	N	8645	5.730	1.831	45	N	.3417	.0023	.346	77.0	159.0	2.188	1.842	St	5.730	1.556	45	N	.3407	.0030	.346	77.0	159.0	2.188	1.842
Kaiser K542, K545	N	Ex	N	SCS	5.190	1.520	30	N	.3410	.0020	.352	51.0	118.0	1.672	1.312	SCS	5.200	1.328	45	N	.3386	.0041	.332	51.0	118.0	1.672	1.312
Lincoln	Y	Bo	1.500	SCS	5.180	2.005	45	N	.3420	.0015	.354	67.0	140.0	1.800	1.470	NCS	5.180	1.510	45	N	.3410	.0025	.354	67.0	140.0	1.800	1.470
Mercury	N	Bo	1.430	SCS	5.020	1.780	45	N	.3420	.0015	.333	58.0	132.0	1.821	1.505	NCS	5.020	1.510	45	N	.3410	.0025	.326	58.0	132.0	1.821	1.505
Nash 541, 542	N	N	1.430	SCS	4.000	1.375	45	N	.3092	.0020	.312	55.0	105.0	1.469	1.156	NCS	4.000	1.188	45	N	.3092	.0015	.312	55.0	105.0	1.469	1.156
5410, 5140	N	N	N	3140	4.781	1.591	45	(d)	.3410	.0031	.325	39.0	78.5	1.750	1.438	(e)	4.781	1.344	45	(d)	.3410	.0031	.325	39.0	78.5	1.750	1.439
5160	N	N	1.475	3140	5.484	1.787	30	(d)	.3730	.0030	.382	55.5	149.0	1.813	1.438	(e)	5.484	1.469	45	(d)	.3725	.0030	.378	55.5	149.0	1.813	1.438
Oldsmobile 88, Super 88, 98	Y	N	1.800	St	4.917	1.750	45	N	.3412	.0032	.366	90.0	156.0	1.829	1.463	SCS	4.941	1.438	45	N	.3934	.0036	.366	90.0	156.0	1.829	1.463
Packard 5400, 5401, 5111	N‡	Bo	N	NCS	5.875	1.672	30	N	.3417	.0018	.342	63.0	140.0	1.750	1.406	AS	5.875	1.438	45	N	.3398	.0037	.342	63.0	140.0	1.750	1.406
5402	Y	Bo	N	NCS	5.875	1.672	30	N	.3417	.0018	.342	63.0	140.0	1.750	1.406	AS	5.875	1.438	45	N	.3398	.0037	.337	63.0	140.0	1.750	1.406
5406, 5426, 5131	Y	Bo	N	SCS	5.875	1.797	30	N	.3417	.0018	.342	63.0	140.0	1.750	1.406	AS	5.875	1.438	45	N	.3398	.0037	.342	63.0	140.0	1.750	1.406
Plymouth P25	N	N	N	SCS	4.844	1.531	45	N	.3405	.0020	.365	42.5	115.0	1.750	1.375	SCS	4.844	1.407	45	AI	.3405	.0040	.365	42.5	115.0	1.750	1.375
Pontiac 5425	N	N	N	SCS	5.719	1.594	30	N	.3105	.0003	.319	59.5	101.0	1.906	1.594	SCS	5.719	1.469	45	N	.3105	.0003	.318	59.5	101.0	1.906	1.594
5427, 5428	N	N	N	SCS	5.531	1.469	30	N	.3105	.0003	.300	62.5	105.0	1.719	1.406	SCS	5.531	1.344	45	N	.3105	.0003	.300	62.5	105.0	1.719	1.408
Studebaker 15G	N	N	N	NCS	4.344	1.344	45	N	.3125	.0025	.344	51.5	98.0	1.656	1.313	2112	4.344	1.281	45	N	.3125	.0025	.344	51.5	98.0	1.656	1.313
5H, 5HY	N	N	1.500	NCS	5.172	1.406	45	N	.3438	.0025	.359	50.0	110.0	2.031	1.672	2112N	5.172	1.281	45	N	.3438	.0025	.359	50.0	110.0	2.031	1.672
Willys 6-226	N	Ex	N	SCS	5.190	1.520	30	N	.3410	.0020	.352	51.0	118.0	1.672	1.312	SS	5.200	1.328	45	N	.3386	.0041	.332	51.0	118.0	1.672	1.312
685B	N	Ex	1.300	SCS	4.531	1.750	45	N	.3736	.0015	.267	73.0	153.0	1.660	1.400	NCS	4.609	1.286	45	N	.3400	.0035	.300	50.0	105.0	1.625	1.329

ABBREVIATIONS

*—Outer spring only; inner spring, 24.0 at 1.530 with valve closed and 56.0 at 1.172 on Series 40 and 58.0 at 1.150 on Series 50, 60 and 70 with valve open.

†—Outer spring only; inner spring, 24.0 at 1.530 with valve closed and 55.0 at 1.180 with valve open.

▲—Outer spring only; inner spring, 25.0 at 1.810 with valve closed and 57.0 at 1.420 with valve open.

■—Outer spring only; inner spring, 21.5 at 1.563 with valve closed and 42.5 at 1.188 with valve open.

●—Outer spring only; inner spring, 13.0 at 1.563 with valve closed and 37.5 at 1.188 with valve open.

♦—Outer spring only; inner spring, 21.5 at 1.562 with valve closed and 42.5 at 1.188 with valve open.

‡—Optional at extra cost.

(a)—21,4NS or 2155N.

(b)—Rich, 4.633; Eaton, 4.636.

(c)—Rich, head, N82120, stem, 8729; Eaton, 81940.

(d)—5440 and 5460 with Le Mans Dual Jet fire engine, 52100; 5410, none.

(e)—Head, 2112; stem, 3140.

(f)—None with std. trans.; yes with Powerglide.

(g)—.294 with std. trans.; .400 with Powerglide.

(h)—160.0 with std. trans.; 182.0 with Powerglide.

(i)—1.821 with std. trans.; 1.998 with Powerglide.

(j)—1.505 with std. trans.; 1.518 with Powerglide.

(k)—.312 with std. trans.; .400 with Powerglide.

AI—Alloy cast iron.

AS—Austenitic steel.

Bo—Both intake and exhaust.

Ex—Exhaust valve.

N—No or none.

NCS—Nickel chrome alloy steel.

SCS—Silichrome steel.

SNS—Silichrome or nickel chrome steel

SS—Stainless steel.

St—Steel.

Y—Yes.

VALVE TIMING — ENGINE OILING — EXHAUST SYSTEMS

†—Outer spring only; inner spring, 24.0 at 1.530 with valve closed and 55.0 at 1.180 with valve open.

42.5 at 1.188 with valve open.

•—Outer spring only; inner spring, 13.0 at 1.563 with valve closed and 37.5 at 1.188 with valve open.

(b)—Rich, 4.633; Eaton, 4.636.

(e)—Rich, head, N82120, stem, 8729; Eaton, 81040.

(g)—.294 with std. trans.; .400 with Powerglide.

(h)—160.0 with std. trans.; 182.0 with Powerglide.

(k)—.312 with std. trans.; .400 with Powerglide.

AI—Alloy cast iron.

AS—Austenitic steel.

SNS—Silichrome or nickel chrome steel

SS—Stainless steel.

St—Steel.

Y—Yes.

VALVE TIMING—ENGINE OILING—EXHAUST SYSTEMS

PASSENGER CAR MAKE AND MODEL	VALVE TIMING: Operating Tappet Clearance, Intake	Operating Tappet Clearance, Exhaust	Tappet Clearance for Timing, Intake	Tappet Clearance for Timing, Exhaust	Timing Mark Location	TIMING: Intake, Opens (°B.T.C.)	Intake, Closes (°A.B.C.)	Exhaust, Opens (°B.B.C.)	Exhaust, Closes (°A.T.C.)	LUBRICATION SYSTEM: Lubrication—Type, Main Bearings	Connecting Rods	Piston Pins	Camshaft Bearings	Tappets	Timing Gear or Chain	Cylinder Walls	Oil Pump Type	Normal Oil Pressure Lbs at M.P.H.	Oil Pressure Gauge—Type	Type Oil Intake	Oil Filter Type	Capacity of Crankcase, Less Filter—qt	Range in Oil Grade Recommended (S.A.E. Nos.) Summer to Subzero	Oil—Type Recommended	EXHAUST SYSTEM: Muffler Type	Exhaust Pipe Diameter (in.)	Tail Pipe Diameter
Buick 40	0	0	.004*	.004*	FDP	25.0	67.0	70.0	42.0	P	P	S	P	P	Nz	SN	G	35-35	M	St	Ff	6	20W- 5W	HD	RF	(a)	2
50, 70	0	0	.004*	.004*	HB	25.0	77.0	70.0	42.0	P	P	S	P	P	Nz	SN	G	35-35	M	St	Ff	6	20W- 5W	HD	RF	(a)	2⅛
60	0	0	.004*	.004*	HB	25.0	77.0	70.0	42.0	P	P	S	P	P	Nz	SN	G	35-35	M	St	Ff	6	20W- 5W	HD	RF	(a)	2
Cadillac 60, 62, 75	0	0	.....	.....	VD	22.0	67.0	63.0	27.0	P	P	S	P	P	Mj	Ij	G	33-30	E	F	Pf	5	20- 5W	.....	RFR	2	1¾
Chevrolet 1500, 2100, 2400	(b)	(c)	.....	(d)	Fly	(e)	(f)	(g)	(h)	P	P	S	P	Mp	Nz	Pj	G	45-1185▲	M	St	N	5	20- 5W	HD	RF	2	1½
2900	.010H	.020H	.....	0†	Fly	19.5	44.5	59.0	5.0	P	P	S	P	Mp	Ps	Pj	G	45-.....	M	St	N	5	20- 5W	HD	ST	1¾	1½
Chrysler C62	.008H	.010H	.014	.014	VD	12.0	44.0	50.0	6.0	P	P	Ms	P	S	Mf	Ms	G	50-30	M	F	Ff	5	30- 5W	NR	RF	2	1¾
C63-1	0	0	VTS	VTS	VD	15.0	57.0	49.0	15.0	P	P	Ms	P	Mp	Mf	Ms	G	60-30	M	F	Ff	5	30- 5W	NR	ST	(i)	2
C63-2, C64, C66	0	0	VTS	VTS	VD	15.0	57.0	49.0	15.0	P	P	Ms	P	Mp	Mf	Ms	G	60-30	M	F	Ff	5	30- 5W	NR	RF	2	1¾
De Soto S19	0	0	VTS	VTS	VD	12.0	52.0	50.0	14.0	P	P	S	P	Mp	Mf	Mj	G	50-1500▲	M	F	Sh	5	30- 5W	.....	RF	(j)	2
S20	.008H	.010H	.014	.014	VD	12.0	44.0	50.0	6.0	P	P	S	P	S	Mf	Mj	G	50-1500▲	M	F	Pf	5	30- 5W	.....	RF	2	1¾
Dodge D50, D53	0	0	VTS	VTS	FDP	17.0	47.0	55.0	9.0	P	P	Mjs	P	Mp	Mf	Mjs	G	48-1500▲	M	F	Sh	5	30- 5W	NR	RF	(j)	2
D51-1, D52	.010H	.010H	.014	.014	FDP	12.0	44.0	50.0	6.0	P	P	Mjs	P	Sp	Mf	Mjs	G	45-1225▲	M	F	Bp	5	30- 5W	NR	RF	2	1¾
D51-2	.010H	.010H	.014	.014	VD	12.0	44.0	50.0	6.0	P	P	Mjs	P	Sp	Mf	Mjs	G	45-1225▲	M	F	Bp	5	30- 5W	NR	RF	2	1¾
Ford 6	.015H	.019H	.013OC	.016OC	VD	13.0	68.0	55.0	22.0	P	P	S	P	Sd	Pst	Pst	G	50-35	E	St	Ff	4	20W- 5W	.....	RF	2	2
8	.019H	.019H	(k)	(k)	CP	8.0	44.0	47.0	5.0	P	P	S	P	Sd	Dd	Pst	G	50-35	E	St	Ff	5	20W- 5W	.....	RF	2	2
Henry J 543	.016C	.016C	.020	.020	CP	9.0	50.0	47.0	12.0	P	P	S	P	S	P	SC	G	35-30	E	F	Pf•	4	20- 5W	Reg	RF	1⅝	1½
544	.016C	.016C	.020	.020	VD	5.0	44.0	47.0	12.0	P	P	S	P	S	P	SC	G	35-30	E	F	Pf•	5	20- 5W	Reg	RF	1⅝	1½
Hudson 1D, 2D, 3D	.010H	.012H	.010	.012	VD	26.8	99.7	64.9	45.7	P	P	S	P	S	Po	Nz	G	40-30	E	F	.....	5	30- 5W	.....	RFR	2	1¾
4D, 5D, 7D	.008H	.010H	.008	.010	Fly	33.7	80.1	73.9	28.4	P	P	S	P	P	Po	Nz	G	40-30	E	F	.....	7	30- 5W	.....	RFR	2	2
Kaiser K542, K515	.014C	.014C	.018	.020	VD	10.0	60.0	55.0	10.0	P	P	S	P	P	P	SC	G	35-30	E	F	Pf	5	20- 5W	Reg	RF	2	2
Lincoln	0	0	.....	.....	VD	18.0	58.0	56.0	20.0	P	P	S	P	P	Dt	Pst	G	40-40	E	St	Ff	5	20- 5W	.....	STR	2¼	2¼
Mercury	.019H	.019H	(l)	(m)	CP	15.0	67.0	57.0	19.0	P	P	S	P	S	Dt	Pst	G	50-35	E	St	Ff	5	20- 5W	.....	ST	2	.....
Nash 541, 542	.015C	.015C	.015	.015	CP	5.0	45.0	40.0	10.0	P	P	S	P	S	S	SC	G	43-30	E	St	Pf•	4	30-10W	Reg	RF	1½	1½
5410	.015H	.015H	.015	.015	VD	10.0	58.0	49.0	19.0	P	P	S	P	S	S	SC	G	50-30	E	St	Pf•	4	20- 5W	Reg	RF	1¾	1½
5440	.015H	.015H	.015	.015	VD	10.0	58.0	49.0	19.0	P	P	S	P	S	S	SC	G	50-30	E	St	Pf•	4	20- 5W	Reg	STR	1¾	1¾
5460	.012H	.016H	.023	.023	VD	12.5	51.5	53.5	10.5	P	P	P	P	S	S	SC	G	50-30	E	St	Pf•	6	20- 5W	Reg	(n)	2	(o)
Oldsmobile 88	0	0	ER	ER	CP	13.5	50.5	49.5	14.5	P	P	S	P	P	P	P	G	40-50	M	St	Ff	5	20- 5W	HD	RF	(p)	2
Super 88, 98	0	0	ER	ER	CB	13.5	50.5	49.5	14.5	P	P	S	P	P	P	P	G	40-50	M	St	Ff	5	20- 5W	HD	RF	(p)	2
Packard 5400	.007H	.010H	.012	.015	VD	15.0	45.0	50.0	9.0	P	P	P	P	P	Mp	Mp	G	40-1300▲	E	F	Pf•	7	20- 5W	.....	ST	2¼	2
5401, 5411	.007H	.010H	.012	.015	VD	10.0	50.0	45.0	14.0	P	P	P	P	P	Mp	Mp	G	40-1300▲	E	F	Pf•	7	20- 5W	.....	ST	2¼	2
5402	0	0	NU	NU	VD	10.0	48.0	48.0	9.0	P	P	P	P	P	Mp	Mp	G	40-1300▲	E	F	Pf	7	20- 5W	.....	ST	2¼	2
5406, 5426, 5431	0	0	NU	NU	VD	22.0	65.0	55.0	15.0	P	P	P	P	P	Mp	Mp	G	40-1300▲	E	F	Pf	7	20- 5W	.....	ST	2¼	2
Plymouth P25 (Early Models)	.010H	.010H	.014	.014	FDP	12.0	44.0	50.0	6.0	P	P	Mjs	P	Js	Mf	Mjs	G	45-45	M	F	Pf•	5	30- 5W	NR	RF	2	1¾
" P25-1 (Late Models)	.010H	.010H	.014	.014	FDP	12.0	44.0	50.0	6.0	P	P	Mjs	P	Js	Mf	Mjs	G	45-45	M	F	N	5	30- 5W	NR	RF	2	1¾
" P25-2, 3 (Late Models)	.010H	.010H	.014	.014	VD	12.0	44.0	50.0	6.0	P	P	Mjs	P	Js	Mf	Mjs	G	45-45	M	F	Pf	5	30- 5W	NR	RF	2	1¾
Pontiac 5425	.012H	.012H	.015C	.015C	HB	12.5	52.5	52.5	12.5	P	P	P	P	S	Mj	S	G	39-40	M	St	Ff	5	20W-10W	Reg	ST	2	1¾
5427, 5428	.012H	.012H	.015C	.015C	HB	5.0	39.0	45.0	5.0	P	P	P	P	S	Mj	S	G	39-40	M	St	Ff	5	20W-10W	Reg	ST	2	1¾
Studebaker 15G	.016C	.016C	.020	.020	VD	15.0	49.0	54.0	10.0	P	P	S	P	P	P	Dj	G	40-1500▲	M	F	Pf	5	30- 5W	.....	RF	1¾	1½
5H, 5HY	.022H	.022H	.030	.030	VD	11.0	54.4	51.4	14.0	P	P	S	P	P	P	Dj	G	40-1500▲	M	F	Pf	6	30- 5W	.....	RF	(q)	1¾
Willys 6-226	.014C	.014C	.018	.020	VD	10.0	60.0	55.0	10.0	P	P	S	P	P	P	SC	G	35-1700▲	E	F	Pf	5	20- 5W	Reg	RF	2	2
685B	.018C	.016C	.026	.020	VD	9.0	50.0	47.0	12.0	P	P	S	P	S	Nz	S	G	35-35	E	F	N	5	30- 5W	.....	RF	1⅝	1½

ABBREVIATIONS

*—Off seat. †—Number one.
▲—Engine r.p.m.
•—Optional at extra cost.
■—None on P25-1.
(a)—Branch, 2″; main, 2½″.
(b)—.010 hot with std. trans.; zero with Powerglide.
(c)—.020 hot with std. trans.; zero with Powerglide.
(d)—Zero lash on No. 1 with std. trans.; replace with mechanical tappet and adjust No. 1 exhaust to zero lash with Powerglide.
(e)—1.0° ATC with std. trans.; 10.5° with Powerglide.
(f)—39.0° with std. trans.; 53.5° with Powerglide.
(g)—42.0° with std. trans.; 49.8° with Powerglide.
(h)—9.0° with std. trans.; 15.0° with Powerglide.
(i)—Branch, 1⅞″; main, 2½″.
(j)—Branch, 1⅞″; main, 2¼″.
(k)—.015 opening; .019 closing.
(l)—.017″ opening; .018″ closing.
(m)—.015″ opening; .017″ closing.
(n)—Reverse flow on 5460; reverse flow and straight through resonator on 5460 with Le Mans Dual Jetfire engine.
(o)—2″ on 5460; 1⅞″ on 5460 with Le Mans Dual Jetfire engine.
(p)—Branch, 2″; main, 2¼″.
(q)—Branch, 1⅝″; main, 2″.
B—Bearing.
C—Cold.
CB—Crankshaft balancer.
CP—Crankshaft pulley.
Dd—Directed drain back.
Dj—Directed jet.
Dt—Drain fed trough.
E—Electric.
ER—End of ramps used for valve timing.
F—Floating.
FDP—Fan drive pulley.
Ff—Full flow.
Fly—Flywheel.
G—Gear.
H—Hot.
HB—Harmonic balancer.
HD—Heavy duty.
Ij—Intermittent jet.
Js—Jet spray.
M—Mechanical.
Mf—Metered flow.
Mj—Metered jet.
Mjs—Metered jet spray.
Mp—Metered pressure.
Ms—Metered spray.
N—No or none.
NR—No recommendation.
NU—Not used.
Nz—Nozzle.
OC—Opening and closing.
P—Pressure.
Pf—Partial flow.
Pj—Pressure jet.
Po—Positive feed.
Ps—Pressure spray.
Pst—Pressure stream.
Reg—Regular. RF—Reverse flow.
RFR—Reverse flow and straight through resonator.
S—Splash.
SC—Squirt hole in connecting rod.
Sd—Splash and drain back.
Sh—Shunt type.
SN—Splash and nozzle.
Sp—Spray. St—Stationary.
ST—Straight through.
STR—Straight through with resonator.
VD—Vibration damper.
VTS—Valve train solid.

FUEL—CARBURETION—COOLING SYSTEMS

PASSENGER CAR MAKE AND MODEL	FUEL SYSTEM														COOLING SYSTEMS													
			Fuel Pump			Carburetor						Air Cleaner Type			Thermostat				Capacity				Radiator Hose					
																							Lower		Upper		By-Pass	
	Fuel Tank Capacity (Gal.)	Recommended Fuel with Standard Head	Location	Pressure Range (lb.)	Vacuum Booster	Make	Model Number	Number Used	Type	Manifold Heat Control	Automatic Choke—Type	Standard	Optional	Radiator Cap Relief Valve Pressure (lb.)	Type	Starts to Open at (Deg.)	By-pass Recirculation—Type	Radiator Core Type	With Heater (qt.)	Without Heater (qt.)	Full Length Water Jackets	Water All Around Cylinder	Number and Type	Inside Diameter and Length	Number and Type	Inside Diameter and Length	Number and Type	Inside Diameter and Length
Buick																												
40	19	Reg	RFE	5	Std	SC	(a)	1	DD	A	In	OB	N	7	Ch	159½	Int	Cel	18.0	16.5	N	Y	1 Mo	1⅝	1 Mo	1⅝	N	.....
50	19	Pre	RFE	5	Std	SC	(a)	1	DD	A	In	OB	N	7	Ch	159½	Int	Cel	18.0	16.5	N	Y	1 Mo	1⅝	1 Mo	1⅝	N	.....
60	19	Pre	RFE	5	Std	SC	(b)	1	DFB	A	In	OB	N	7	Ch	159½	Int	Cel	18.0	16.5	N	Y	1 Mo	1⅝	1 Mo	1⅝	N	.....
70	19	Pre	RFE	5	Std	SC	(b)	1	DFB	A	In	OB	N	7	Ch	159½	Int	Cel	20.0	18.5	N	Y	1 Mo	1⅝	1 Mo	1⅝	N	.....
Cadillac 60, 62	20	Pre	RFE	4–5¼	Std	CR	(c)	1	DFB	A	In	OB	N	13½	Ch	165½	Int	TC	22.0	19.8	Y	Y	1 Mo	1¾–8 7/16	1 Mo	1¾–8 7/16	N	.....
75	20	Pre	RFE	4–5¼	Std	CR	(c)	1	DFB	A	In	OB	N	13½	Ch	165½	Int	TC	24.5	19.8	Y	Y	1 Mo	1¾–8 7/16	1 Mo	1¾–8 7/16	N	.....
Chevrolet 1500, 2100, 2400	16	Reg	RFE	3½–4½	Opt	RP	(d)	1	DS	A	In	OM	OB	7	Ch	145	Int	Cel	17.0	16.0	Y	Y	(e)	(f)	1 Mo	1¼–6¾	N	.....
2900	17¼	Pre	RFE	3½–4½	Std	Car	3706989	3	SS	N	M	ES	N	4	Ch	151	Int	Cel	18.3	17.8	Y	Y	2 Mo*	1½–6½†	(g)	(h)	N	.....
Chrysler C62	17	Reg	RFE	3½–5	N	BB	(j)	1	DS	A	In	OB	N	7	BP	159½	Ext	Cel	16.0	15.0	Y	N	1 Mo	1½	1 Mo	1¾	1 St	1–1½
C63-1	20	Reg	RFE	3½–5	N	(i)	WCD-2039SA	1	DD	A	In	OB	N	7	BP	159½	Ext	FT	26.0	25.0	Y	Y	1 Mo	1¾	1 Mo	1¾	1 Mo	1¼
C63-2, C64, C66	20	Reg	RFE	3½–5	N	Car	WCFB-2041S	1	DFB	A	In	OB	N	7	BP	159½	Ext	FT	26.0	25.0	Y	Y	1 Mo	1¾	1 Mo	1¾	1 Mo	1¼
De Soto S19	17	Reg	RFE	3½–5	N	BB	(k)	1	DD	A	In	OB	N	7	BP	159½	Ext	FT	23.0	22.0	Y	Y	1 Mo	1¾	1 Mo	1¾	1 Mo	1¼
S20	17	Reg	RFE	3½–5	N	BB	E9C1	1	DS	A	In	OB	N	7	BP	159½	Ext	Cel	16.0	15.0	Y	N	1 Mo	1½	1 Mo	1¾	1 St	1–1½
Dodge D50, D53	17	Reg	RFE	4–5½	N	Strom	WW-3-108	1	DD	A	In	OB	N	7	Ch	159½	Int	Cel	20.0	19.0	Y	Y	1 Mo	1½	1 Mo	1¾	N	.....
D51, D52	17	Reg	RFE	4–5½	N	BB	E9T1	1	DS	A	EM	OB	N	7	Ch	159½	Int	Cel	15.0	14.0	Y	N	1 Mo	1½	1 Mo	1¾	N	.....
Ford 6	17	Reg	RCE	4–5	Opt	Hol	1904-F	1	DS	A	M	DM	OB	7	Ch	159½▲	Int	FT	16.0	15.0	Y	Y	1 Mo	1½–17 3/16●	1 Mo	1½–8 3/16●	N	.....
8	17	Reg	LFE	4–5	Opt	HF	AA-1	1	DD	A	M	DM	OB	7	Ch	159½▲	Int	FT	21.0	20.0	Y	Y	1 Mo	1½–10 5/8●	1 Mo	1½–11 13/16●	N	.....
Henry J 543	13	Reg	.....	3¼	Opt	Car	YF	1	DS	A	M	DM	OB	4	Ch	152	Int	Cel	11.8	10.8	Y	N	1 Mo	1½	1 Mo	1½	N	.....
544	13	Reg	.....	5¼	Opt	Car	YF	1	DS	A	M	DM	OB	4	Ch	152	Int	Cel	10.5	9.5	Y	N	1 Mo	1½	1 Mo	1½	N	.....
Hudson 1D, 2D, 3D	15	Reg	.....	4–5	Opt	Car	(l)	(p)	DS	A	In	DM	OB	7	BP	152½	Int	FT	16.0	15.0	Y	N	1 Mo	1⅝–10¾	1 Mo	1½–13½	N	.....
4D	20	Reg	.....	4–5	Opt	Car	(m)	(p)	DS	A	In	OB	(q)	7	BP	152½	Int	FT	19.5	18.5	Y	Y	2 St	1⅝–4	1 Mo	1½–12½	N	.....
5D	20	Reg	.....	4–5	Std	Car	(n)	(p)	DD	A	In	OB	(q)	7	BP	152½	Int	FT	19.5	18.5	Y	Y	2 St	1⅝–4	1 Mo	1½–12½	N	.....
7D	20	Reg	.....	4–5	Std	Car	(o)	(p)	DD	A	In	DM	OB	7	BP	152½	Int	FT	19.5	18.5	Y	N	2 St	1⅝–4	1 Mo	1½–12½	N	.....
Kaiser K542	17	Reg	.....	9	Opt	Car	WCD	1	DD	N	.....	DM	OB	4	Ch	152	Int	Cel	13.5	12.5	Y	Y	(1)	1½	1 Mo	1½	N	.....
K545	17	Reg	.....	5	Opt	Car	WGD	1	DD	N	.....	DM	OB	4	Ch	152	Int	Cel	13.5	12.5	Y	Y	1 Mo	1½	1 Mo	1½	N	.....
Lincoln	20	Pre	LFE	3½–4½	Std	Hol	2140	1	DFB	A	AM	OB	N	13½	BP	160½	Ext	FT	24.5	22.5	Y	Y	1 Mo	2–10 11/16●	1 Mo	1¾–8 15/16●	N	.....
Mercury	19	Reg	LFE	4–5	Std	Hol	2140	1	DFB	A	AM	DM	OB	13½	Ch	159½▲	Ext	FT	20.0	19.0	Y	Y	1 Mo	1¾–11 5/8●	1 Mo	1¼–11 3/16●	N	.....
Nash 541, 542	10½	Reg	.....	1½–2½	N	Zen	30-VIG-8	1	DS	N	M	OB	N	4	BP	162½	Ext	FT	7.5	.....	Y	Y	1 Mo	1 1/16	1 Mo	1¼	1 St	7/16–2⅞
5410	20	Reg	RFE	4–5½	(r)	Car	YF-2014S	1	DS	N	In	DM	OB	7	Ch	170	N	FT	12.0	11.0	Y	N	1 Mo	1¾	1 Mo	1½	N	.....
5440	20	Reg	RFE	4–5½	(r)	Car	YF-2098S	2	DS	N	In	DM	OB	7	Ch	170	N	FT	15.0	14.0	Y	N	1 Mo	1¾	1 Mo	1½	N	.....
5460	20	Reg	RFE	4–5½	(r)	Car	(s)	(t)	SS	N	In	DM	OB	7	Ch	170	N	FT	18.0	17.0	Y	Y	1 Mo	1¾	1 Mo	1¾	N	.....
Oldsmobile 88	20	Pre	.....	4–5	Std	Car	WGD	1	DD	A	In	DM	OB	7	Ch	159½	Int	Cel	21.5	20.5	Y	Y	1 Mo	1¾–15½	1 Mo	1½–11 13/16	N	.....
Super 88, 98	20	Pre	.....	4–5	Std	CR	(u)	1	DFB	A	In	DM	OB	7	Ch	159½	Int	Cel	21.5	20.5	Y	Y	1 Mo	1¾–15½	1 Mo	1½–11 13/16	N	.....
Packard 5400	20	Pre	RFE	3½–5½	Std	Car	WGD-986S	1	DD	A	In	OM	OB	12	Ch	170	N	FT	20.6	19.9	Y	Y	1 Mo	1¾–14 11/64	1 Mo	1¾–10 5/8	N	.....
5401, 5411	20	Pre	RFE	3½–5½	Std	Car	WGD-2102S	1	DD	A	In	OM	OB	12	Ch	170	N	FT	20.6	19.9	Y	Y	1 Mo	1¾–14 11/64	1 Mo	1¾–10 5/8	N	.....
5402	20	Pre	RFE	4–5	Std	Car	WCFB-2103S	1	DFB	A	In	OB	N	12	Ch	170	N	FT	21.1	19.9	Y	Y	1 Mo	1¾–14 11/64	1 Mo	1¾–10 5/8	N	.....
5406	20	Pre	RFE	4–5	Std	Car	WCFB-2212S	1	DFB	A	In	OB	N	12	Ch	170	N	FT	21.1	19.9	Y	Y	(g)	(v)	1 Mo	1¾–10 5/8	N	.....
5426	20	Pre	RFE	4–5	Std	Car	WCFB-2212S	1	DFB	A	In	OB	N	12	Ch	170	N	FT	21.1	19.9	Y	Y	1 Mo	1¾–14 11/64	1 Mo	1¾–10 5/8	N	.....
5431	20	Pre	RFE	4–5	Std	Car	WCFB-2212S	1	DFB	A	In	OB	N	12	Ch	170	N	FT	21.1	19.9	Y	Y	(g)	(w)	1 Mo	1¾–10 5/8	N	.....
Plymouth P25 (Early Models)	17	Reg	RFE	4–5½	N	BB	(x)	1	DS	A	(y)	OB	N	7	Ch	159½	Int	Cel	14.0	13.0	Y	N	1 Mo	1½	1 Mo	1¾	N	.....
P25 (Late Models)	17	Reg	RFE	4–5½	N	BB	2063S	1	DS	A	In	OB	N	7	Ch	159½	Int	Cel	14.0	13.0	Y	N	1 Mo	1½	1 Mo	1¾	N	.....
Pontiac 5425	20♣	Reg	.....	4–5¼	Std	Car	WCD-2010S	1	DD	A	In	OM	OB	7	BP	151	Int	Cel	20.1	18.3	Y	N	1 Mo	1¾–17¾	1 Mo	1¾–13 15/16	N	.....
5427, 5428	20♣	Reg	.....	4–5¼	Std	Car	WCD-2122S	1	DD	A	In	OM	OB	7	BP	160	Int	Cel	20.6	18.8	Y	N	1 Mo	1¾–15⅛	1 Mo	1¾–8 15/16	N	.....
Studebaker 15G	18	Reg	RFE	4–5	N	Car	(z)	1	DS	A	In	DP	OB	7	Ch	157½	N	Cel	11.5	10.0	Y	N	1 Mo	1¼	1 Mo	1¼	N	.....
5H	18	Reg	TFE	4–5	N	Strom	WW-6-112C	1	DD	A	In	DP	OB	7	Ch	157½	Int	Cel	18.8	17.3	Y	Y	1 Mo	1¼	1 Mo	1¼	N	.....
5HY	18	Reg	TFE	4–5	N	Strom	WW-6-113	1	DD	A	In	DP	OB	7	Ch	157½	Int	Cel	18.8	17.3	Y	Y	1 Mo	1¼	1 Mo	1¼	N	.....
Willys 6-226	19	.....	.....	5	Std	Car	WGD	1	DD	N	In	OB	N	7	Ch	149	Int	Cel	14.0	13.0	Y	Y	1 Mo	1½	1 Mo	1½	N	.....
685B	19	.....	LFE	3½–4½	Std	Car	YF-924S	1	DS	N	M	OB	N	7	Ch	151	Int	Cel	12.0	11.0	Y	N	1 Mo	1½	1 Mo	1½	N	.....

ABBREVIATIONS

*—With steel tube elbow between.
†—Steel tube, 1 11/32–6½.
▲—179½ optional.
●—Developed length.
♣—Station wagon, 16 gal.

(a)—Stromberg, AAVB-267; Carter, WCD.
(b)—Stromberg, 4 AUVB-267; Carter, WCFB.
(c)—Carter, WCFB-2109-S; Rochester, 4-GC.
(d)—7005921 with std. trans.; 7005922 with Powerglide.
(e)—One moulded with std. trans.; 2 moulded with Powerglide.
(f)—1½–16½ with std. trans.; 1¼–4 9/16 and 1½–2 5/8 with Powerglide.
(g)—One moulded and one straight.
(h)—Moulded, 1¼-12; straight, 1¼-10½.
(l)—Carter on early models; Ball and Ball on late models.
(j)—E9C1 with std. trans.; E9B1 with Powerflite.
(k)—2067-S on early models; 2129-S on late models.
(l)—WAI-2009-SA std.; WAI-2013-S optional.
(m)—WAI-749-S std.; WAI-2114-S optional with optional 262 cu. in. engine.
(n)—WGD-2115-S std.; WAI-2114-S optional.
(o)—WGD-2115-S std.; WAI-2113-S optional.
(p)—One std.; two optional.
(q)—Dry wire mesh with optional twin carburetors.
(r)—Std. on over drive and Hydramatic equipped models only.
(s)—YH-895-S on 5460; YH-973-S front and YH-974-S rear on 5460 model with Le Mans Dual Jetfire engine.
(t)—One on 5460; two on 5460 with Le Mans Dual Jetfire engine.
(u)—Carter WCFB or Rochester 4GC.
(v)—Moulded, 1¾–3¾; straight, 1¾–5 7/16.
(w)—1¾–14 11/64, Pacific and convertible; moulded, 1¾–3¾, straight, 1¾–5 7/16, Caribbean.
(x)—Early models, D6H2; late models, 920-S.
(y)—Early models, automatic electric on manifold; late models, integral.
(z)—Regal and Deluxe, WE-2108-S; Custom, WE-2190-S.
(1)—One steel, 2 moulded.
A—Automatic.
AM—Hot filtered air and vacuum, mounted on intake manifold with linkage to carburetor.
BB—Ball and Ball (Carter).
BP—By-pass.
Car—Carter Carburetor Co.
Cel—Cellular.
Ch—Choke.
CR—Carter or Rochester.
DD—Downdraft dual.
DFB—Downdraft four barrel.
DM—Dry wire mesh.
DP—Dry plasticized paper, water repellent and resistant.
DS—Downdraft single.
EM—Automatic electric on manifold.
ES—Air inlet extension and screen.
Ext—External.
FT—Fin and tube.
Hol—Holley Carburetor Co.
HF—Holley or Ford.
In—Integral.
Int—Internal.
LFE—Left front of engine.
M—Manual.
N—No or none.
Mo—Moulded.
OB—Oil bath.
OM—Oil wetted wire mesh.
Opt—Optional.
Pre—Premium.
RCE—Right center of engine.
Reg—Regular.
RFE—Right front of engine.
RP—Rochester Products Div.
SC—Stromberg or Carter.
SS—Sidedraft single.
St—Straight.
Std—Standard.
Strom—Stromberg Carburetor Div.
TC—Tube and center.
TFE—Top front of engine.
V—Yes.
Zen—Zenith Ltd.

FAN AND DRIVE BELTS—ELECTRICAL SYSTEM DATA

FAN AND DRIVE BELTS—ELECTRICAL SYSTEM DATA

PASSENGER CAR MAKE AND MODEL	DRIVE BELTS: Fan: Number Used	Fan: Angle of V (deg.)	Fan: Outside Length (in.)	Fan: Width (in.)	Generator: Angle of V (deg.)	Generator: Outside Length (deg.)	Generator: Width (in.)	BATTERY: Make	Model	S.A.E. Designation	Location	Terminal Grounded	ELECTRICAL SUPPLY SYSTEM: Generator: Make	Model	Type	Ratio—Gen to Cr/s rev. (To—1)	Regulator: Make	Model	Type	Cut-out Relay: Closing Voltage at Generator R.P.M.	Cut-out Relay: Reverse Current to Open (amp.)	Regulated: Voltage	Regulated: Current	Minimum Generated R.P.M. Required	Voltage Test Conditions: Temperature (deg.)	Voltage Test Conditions: Load	Voltage Test Conditions: Other
Buick 40, 50, 60, 70	1	36	52.7	5/8	(a)			DR	3EM-60W	2E	LFS	Neg	DR	1102008	SW	2.17	DR	1118825	CV	11.8–13.6	1–6	14.0–15.0	27–33	2300H	150F	1–10 amp	N
Cadillac 60, 62, 75	1	40	57.0	5/8	(a)			DR	3EM-60W	2E	RFD	Neg	DR	1102002	SW	2.15	DR	1118750	CV	11.8–13.6	0–4	14.0–15.0	27–33	2150H	H	8–10 amp	FR
Chevrolet 1500, 2100, 2400	1	41	42.5	5/8	(a)			DR	15AAG-W	1M	UR	Neg	DR	1100018	SW	2.05	DR	1118827	CV	6.4–1160	.....	7.4	45	2750C	H	8–10 amp	N
2900	1	41	40.0	5/8	(a)			DR	15AA6-W	1M	UR	Neg	DR	1102793	SW	2.05	DR	1118725	CV	6.4–1160	.....	7.4	45	?250C	H	8–10 amp	N
Chrysler C62	1*	36	49.0	5/8	(a)			AW	(b)	2H	ULF	Pos	AL	GGW-6001	SW	1.82	AL	VRP-6004A	CV	6.3–6.8–960	4–5	7.1–7.4	45–57	1000H	70F	10 amp	N
C63	2	36	39.0	5/8	36	43.5	5/8	AW	(c)	2H	ULF	Pos	AL	GGW-6001	SW	2.09	AL	VRP-6004A	CV	6.3–6.8–960	4–5	7.1–7.4	45–57	1000H	70F	10 amp	N
C64	2	36	39.0	5/8	36	43.5	5/8	AW	(c)	2H	ULF	Pos	AL	GGU-6001	SW	1.96	AL	VAV-6001B	CV	6.3–6.8–960	4–5	7.1–7.14	50–62	900H	70F	10 amp	N
C66	2	36	39.0	5/8	36	43.3	5/8	AL	12H-65R	.....	ULF	Pos	AL	GHM-6002	SW	2.10	AL	VRX-6003A	CV	13.0–13.75–960	8–9	14.2–14.8	25–38	800H	70F	10 amp	N
De Soto S19	2	36	38.0	5/8	36	38.0	5/8	AW	(d)	2H	UL	Pos	AL	GGW-6001	SW	1.89	AL	VBE-6001A	CV	6.3–6.8–1000	4–5	7.1–7.4	45–57	1000	70F	10 amp	N
S20	1*	36	49.0	5/8	(a)			AW	(d)	2H	UL	Pos	AL	GGW-6001	SW	1.89	AL	VBE-6001A	CV	6.3–6.8–1000	4–5	7.1–7.4	45–57	1000	70F	10 amp	N
Dodge D50, D53	1	36	63.8	5/8	(a)			AW	(e)	1H	ULF	Pos	AL	GGW-6012	SW	1.96	AL	VRP-6004A	CV	6.3–6.8–960	4–5	7.1–7.4	45–57	1000H	70F	10 amp	N
D51, D52	1	36	49.0	5/8	(a)			AW	(e)	1H	ULF	Pos	AL	GGW-6001	SW	1.96	AL	VRP-6004A	CV	6.3–6.8–960	4–5	7.1–7.4	45–57	1000H	70F	10 amp	N
Ford 6	1*	38	37.0	5/8	(a)			Var	Var	.....	URF	Pos	Fo	FAA-10000A	SW	2.00	FA	(f)	CV	6.0–6.6	0–8	7.4–7.8	34–46	1850	75F	10 amp	N
8	1*	38	44.0	5/8	(a)			Var	Var	.....	URF	Pos	Fo	FBC-10000A	SW	2.00	FA	(f)	CV	6.0–6.6	0–8	7.4–7.8	34–46	1850	75F	10 amp	N
Henry J 543	1	38	44.5	11/16	(a)			AL	1M-100D	1H	UR	Pos	DR	1102789	SW	1.71	DR	1118731	CV	5.9–6.7	.....	7.0–7.7	34–42	1000	75F	8–10 amp	N
544	1	38	37.5	11/16	(a)			AL	1M-100D	1H	UR	Pos	DR	1102789	SW	1.72	DR	1118731	CV	5.9–6.7	.....	7.0–7.7	34–42	1000	75F	8–10 amp	N
Hudson 1D, 2D, 3D	1	36	39.2	13/16	(a)			Nat	1W-90	1M	UL	Pos	AL	GGW-4802A	SW	1.77	AL	VBE-6104A	CV	6.7–920	NS	7.35	45	1940	70F	.....	.....
4D, 5D, 7D	1	47	41.4	11/16	(a)			Nat	21S-100	.....	UL	Pos	AL	GGW-4801D	SW	.....	AL	VBE-6104A	CV	6.7–920	NS	7.35	45	1940	70F	.....	.....
Kaiser K542, K545	1	36	41.0	5/8	(a)			AL	1M-100D	1H	UL	Pos	DR	1102782	SW	1.75	DR	1118842	CV	5.9–6.7	.....	7.2–7.6	40–46	925	75F	8–10 amp	N
Lincoln	1*	36	45.7	5/8	(a)			AL	.....	.....	UTR	Pos	Fo	FBB-10000A	SW	2.00	Fo	FAJ-10505A	CV	6.0–6.6	0–8	7.4–7.8	48–52	1850H	75F	10 amp	N
Mercury	1*	36	44.0	5/8	(a)			Var	Var	.....	URF	Pos	Fo	FBA-10000A	SW	2.00	FA	(g)	CV	6.0–6.6	0–8	7.4–7.8	38–42	1750	75F	10 amp	N
Nash 541, 542	1	32	34.9	5/8	(a)			Luc	GTW9A	....	URS	Pos	Luc	C39-PV-2	SW	1.31	Luc	RB106-1	TC	12.7–13.3–1125	3–5	15.8–16.4	CWV	1000	20Ce	OC	N
5410	1	38	40.1	11/16	(a)			AL	1M-100	1M	UH	Pos	DR	1100021	SW	1.92	DR	1118841	CV	6.2–1050	4–6	7.3	38	625	H	8–10 amp	N
5440	1	38	41.5	11/16	(a)			AL	1M-100	1M	UH	Pos	DR	1102777	SW	1.92	DR	1118828	CV	6.2–1225	4–6	7.3	47	625	H	8–10 amp	N
5460	1	38	40.1	11/16	(a)			AL	1H-105D	1H	UH	Pos	DR	1102777	SW	1.92	DR	1118828	CV	6.2–1225	4–6	7.3	47	625	H	8–10 amp	N
Oldsmobile 88, Super 88, 98	1	36	57.4	5/8	(a)			DR	3KM-60W	.....	UL	Neg	DR	1102003	SW	2.24	DR	1118826	CV	12.8	0–4	14.5	30	3200	80F	1–10 amp	N
Packard 5400, 5401	1*	40	41.2	5/8	(a)			AWN	(i)	.....	UL	Pos	AL	GGW-6003A	SW	2.16	AL	VBE-6102A	CV	6.3–6.8–1000	4–5	7.4	45	2440H	70F	45 amp	N
5402, 5411	1*	40	41.2	5/8	(a)			AWN	(i)	.....	UL	Pos	DR	1102778	SW	2.16	DR	1118829	CV	6.2–7.0–1300	3	7.4	45	2400H	70F	45 amp	N
5406, 5426	1*	40	41.2	5/8	(a)			AWN	(j)	.....	UL	Pos	DR	1102778	SW	2.16	DR	1118829	CV	6.2–7.0–1300	3	7.4	45	2400H	70F	45 amp	N
5431	(h)	(l)	41.2	5/8	(a)			AWN	(j)	.....	UL	Pos	DR	1102778	SW	2.16	DR	1118829	CV	6.2–7.0–1300	3	7.4	45	2400H	70F	45 amp	N
Plymouth P25	1	36	49.0	5/8	(a)			AW	(k)	1M	UL	Pos	AL	GGW-6001	SW	1.82	AL	VBE-6001A	CV	6.3–6.8–960	4–5	7.1–7.4	45–57	1000H	70F	10 amp	N
Pontiac 5425, 5427, 5428	1	34	40.0	13/16	(a)			DR	15E-6W	2E	UL	Neg	DR	1102794	SW	2.18	DR	1118827	CV	5.9–6.8	NS	7.3	45	2500	H	IL	FR
Studebaker 15G	1	38	40.3	5/8	(a)			Wil	HDW-1-1000	.....	UL	Pos	AL	GGW-4801E	SW	1.84	AL	VBE-6101A	CV	6.3–6.8	1	7.2–7.5	44–46	2040	70F	10 amp	3500†
5H, 5HY	1	38	56.0	5/8	(a)			Wil	HDW-1-1000	.....	UL	Pos	DR	1102778	SW	2.09	DR	(l)	CV	6.1–7.0	1	(m)	44–46	2400	70F	10 amp	3500†
Willys 6-226	1	40	.....	11/16	(a)			AW	(n)	.....	UR	Neg	AL	GGW-4801EN	SW	1.75	AL	VBE-6105A	Vib	6.3–6.8	4–5	7.2–7.4	45H	2450H	70F	22 amp	.....
685B	1	40	37.0	5/8	(a)			AW	(n)	.....	UR	Neg	AL	GGW-4801-D	SW	1.50	AL	VBE-6105A	Vib	6.3–6.8–1000	4–5	7.2–7.4	45H	2450H	70F	22 amp	.....

ABBREVIATIONS

*—Two belts used with power steering.
†—r.p.m.
(a)—Same belt drives both fan and generator.
(b)—Auto-Lite, 2H-120-D; Willard, HW-2-120-C.
(c)—Auto-Lite, 2H-135-RD; Willard, MW-2-135-R.
(d)—Auto-Lite, 2H-120-B; Willard, HW-2-120-C.
(e)—Auto-Lite, 1H-105-D; Willard, HW-1-105-C.
(f)—FAC-10505-A1 or FAC-10505-A2.
(g)—FAD-10505-A or FAD-10505-C.
(h)—One for Pacific and convertible (two with power steering); two for Caribbean.
(i)—Auto-Lite, 2L-100; Willard, SW-2L-100; National, 2L-S-100.
(j)—Auto-Lite, 2FH-120; Willard, HW-2F-120; National, 2F-S-120.
(k)—Auto-Lite, 1M-100-D; Willard, HW-1-100-C.
(l)—1118828 or 1118730.
(m)—6.9–8.3 with 1118828; 7.2–8.1 with 1118730.
(n)—Auto-Lite, 1M-90; Willard, 80AH.
AL—Electric Auto-Lite Co.
AW—Auto-Lite or Willard.
AWN—Auto-Lite, Willard or National.
C—Cold.
Ce—Centigrade.
CV—Current and voltage control.
CWV—Current windings incorporated on voltage coil.
DR—Delco-Remy Div.
F—Fahrenheit.
FA—Ford or American Bosch.
Fo—Ford Motor Co.
FR—Fixed resistance method.
H—Hot.
IL—Ignition and instrument load.
LFS—Left front fender skirt, under hood.
Luc—Lucas.
Nat—National.
Neg—Negative.
NS—Not specified.
OC—Open circuit.
Pos—Positive.
RFD—Right front of dash, under hood.
SW—Shunt wound.
TC—Temperature compensated.
UH—Under hood.
UL—Under hood, left side.
ULF—Under hood, left front.
UR—Under hood, right side.
URF—Under hood, right front.
URS—Under rear seat, right side.
UTR—Under toe board, right side.
Var—Various.
Vib—Vibrator.
Wil—Willard.

STARTERS AND IGNITION SYSTEMS

PASSENGER CAR MAKE AND MODEL	STARTING SYSTEM: MOTOR: Make	Model	Engine Cranking Speed (RPM)	Test Conditions	Lock Test: Amps	Lock Test: Volts	Lock Test: Torque (ft. lb.)	No Load Test: Amps	No Load Test: Volts	No Load Test: RPM (min.)	CONTROL: Switch	CONTROL: Starting Procedure	DRIVE: Engagement—Type	DRIVE: Pinion Meshes	DRIVE: Number Teeth: Pinion	DRIVE: Number Teeth: Flywheel	DRIVE: Flywheel Tooth Face Width	IGNITION SYSTEM: COIL: Make	COIL: Model	COIL: Amps.: Engine Stopped	COIL: Amps.: Engine Idling	DISTRIBUTOR: Make	DISTRIBUTOR: Model	Spark Advance Data (at distributor shaft): Centrifugal Advance (Averages): Start (RPM)	Centrifugal Advance (Averages): Maximum Degrees (at RPM)	Vacuum Advance Start (in Hg.)	Vacuum Advance (max. deg. @ in. Hg.)	Breaker Gap (in.)	Cam Angle (deg.)	Breaker Arm Tension (oz.)
Buick	DR	1107621	160	EH	470	5.10	12.0	95	10.20	4000	Sol	Dap	SOC	F	9	180	.573	DR	1115082*	4.50	2.50	DR	1110849	.3°-300	12.3°-1750	0°-7.50	10.5°-11.5	.015†	NR	21
Cadillac	DR	1107622	60	NA	460	5.20	11.5	75	10.30	6500	Sol	Tik	SsOC	F	9	176	.500	DR	1115082*	3.00	1.25	DR	1110844	0°-450	12.3°-2000	0°-7.75	13.8°-16.5	.019	31	21
Chevrolet 1500, 2100, 2100	DR	1107109	NA	EH	550	3.25	11.0	80	5.60	5500	Sol	Tik	SOC	F	9	139	.500	DR	1115380	4.50	2.50	DR	(a)	0°-300	13.0°-1750	0°-5.00	8.5°-10.0	.015	42	21
2900	DR	1107109	125	EH	525	3.40	11.0	65	5.00	5000	Sol	Tik	OC	F	9	139	.500	DR	1115394	5.40	3.00	DR	1112314	0°-300	13.0°-1750	0°-5.00	15.0°-8.8	.016	44	21
Chrysler C62	AL	MCL-6117	75	EH	410	2.00	8.0	65	5.00	4300	Sol	Tik	SgOC	F	9	146	.375	AL	CR-4001	5.00	2.25	AL	1AT-4102	0°-350	10.0°-1425	1.0°-6.00	9.0°-15.0	.019	39	19
C63, C64	AL	MCL-6121A	75	EH	410	2.00	8.0	65	5.00	4300	Sol	Tik	SgOC	F	9	146	.375	AL	CR-6015	5.00	2.25	AL	1AZ-4001C	0°-390	12.0°-2100	1.0°-6.00	11.5°-17.0	.017	34▲	19
C66	AL	MDB-6001A	75	EH	140	4.00	4.0	21	10.00	4000	Sol	Tik	SgOC	F	9	146	.375	AL	CZ-4001	3.00	2.20	AL	1AZ-4001C	0°-390	12.0°-2100	1.0°-6.00	11.5°-17.0	.017	34▲	19
De Soto S19	AL	MCH-6113A	75	EH	335	2.00	6.5	65	5.00	4300	Sol	Tik	SOC	F	9	146	.375	AL	CR-6015	5.00	2.25	AL	1AZ-4002A	0°-400	11.0°-1920	1.0°-6.00	11.5°-17.0	.017	34▲	19
S20	AL	MCL-6117	75	EH	410	2.00	8.0	65	5.00	4900	Sol	Tik	SOC	F	9	146	.375	AL	CR-4001	5.00	2.25	AL	1AT-4102	0°-350	10.0°-1425	1.0°-6.00	9.0°-15.0	.019	39	19
Dodge D50, D53	AL	MCH-6206	75	EH	500	3.00	11.0	60	5.50	4900	Sol	Tik	Ben	F	9	146	.375	AL	CR-6015	5.00	2.25	AL	1AZ-4003A	0°-360	11.0°-1620	1.0°-6.00	11.5°-17.0	.017	34▲	19
D51, D52	AL	MCH-6205	75	EH	500	3.00	11.0	60	5.50	4900	Sol	Tik	Ben	F	9	146	.375	AL	CR-4001	5.00	2.25	AL	1AT-4101B	0°-425	8.0°-1350	1.0°-6.00	8.0°-14.0	.020	39	19
Ford 6	Fo	FAC-11001B	125	EW	700	3.50	16.0	70	6.00	4500	Sol	Tik	Ben	R	9	146	.375	Fo	8BA-12029	5.00	3.00	Hol	FAA-12127C	None	None	1.3°-.32	14.5°-7.2	.025	37	19
8	Fo	FAC-11001B	120	EW	700	3.50	16.0	70	6.00	4500	Sol	Tik	Ben	R	9	146	.375	Fo	8BA-12029	5.00	3.00	Fo	FAE-12127A	None	None	.5°-.28	17.0°-5.6	.015	27	19
Henry J 543	DR	1107131	85	EW	550	3.25	11.0	70	5.65	5500	Sol	Dsb	OC	F	9	129	.375	DR	1115327	5.00	1.30	DR	1110230	1°-300	24.0°-1500	-3.50	22.0°-15.0	.022	30	19
544	DR	1107131	85	EW	550	3.25	11.0	70	5.65	5500	Sol	Dsb	OC	F	9	129	.375	DR	1115336	5.00	1.30	DR	1110231	2°-350	26.0°-1500	-5.00	12.0°-15.0	.022	34	19
Hudson 1D, 2D, 3D	AL	MZ-4167	120	....	280	2.00	4.4	70	5.50	4300	Sol	Tik	Ben	R	9	128	.406	AL	CR-6012A	4.50	2.50	AL	1AT-4016	0°-300	14.5°-1500	0°-5.00	7.5°-9.0	.020	39	19
4D	AL	MZ-4167	120	....	280	2.00	4.4	70	5.50	4300	Sol	Tik	Ben	R	9	134	.406	AL	CR-6012A	4.50	2.50	AL	1AT-4009	0°-300	10.0°-1200	0°-9.50	5.0°-12.0	.020	39	19
5D, 7D	AL	MCH-6109	120	....	335	2.00	6.0	65	5.50	4900	Sol	Tik	Ben	R	9	134	.406	AL	CR-6012A	4.50	2.50	AL	1AT-4009A	0°-500	9.0°-2000	0°-13.00	4.0°-12.0	.020	39	19
Kaiser K542	DR	(b)	100	EW	550	3.25	12.0	70	5.65	5500	Sol	Tik	Ben	F	9	130	.500	DR	1110236	5.00	1.30	DR	1110238	0°-325	10.0°-1000	9.0°-11.00	6.0°-15.0	.016	42	21
K545	DR	(b)	100	EW	550	3.25	12.0	70	5.65	5500	Sol	Tik	Ben	F	9	130	.500	DR	1110236	5.00	1.30	DR	1110224	0°-360	20.0°-1600	9.0°-11.00	12.0°-15.0	.022	34	19
Lincoln	Fo	FAC-11001H	120	EW	700	3.50	14.5	70	6.00	4750	Sol	Pbd	Ben	R	9	152	.375	Fo	8BA-12029	5.00	3.00	Hol	FAF-12127B	None	None	2.5°-.19	17.0°-2.8	.015	27	19
Mercury	Fo	FAC-11001B	120	EW	700	3.50	16.0	70	6.00	4500	Sol	Tik	Ben	R	9	146	.375	Fo	8BA-12029	5.00	3.00	Hol	12127	None	None	.3°-.15	16.5°-1.5	.015	27	19
Nash 541, 542	Luc	M35G-1	325	RT	380	7.50	9.3	45	12.00	8500	Man	PuB	Ben	R	9	117	.375	Luc	Q12	2.70	.90	Luc	DM2	0°-400	15.0°-1900	0°-5.00	10.0°-17.0	.015	30	22
5410	DR	(c)	NA	.....	550	3.25	12.0	70	5.65	5500	(e)	(f)	Ben	R	9	122	.438	DR	1115393	5.00	2.30	DR	1112382	2°-600	24.0°-2800	0°-4.00	7.5°-15.0	.022	34	19
5440	DR	(c)	NA	.....	550	3.25	12.0	70	5.65	5500	(e)	(f)	Ben	R	9	122	.438	DR	1115378	5.00	2.30	DR	1112401	2°-600	24.0°-2800	0°-4.00	7.5°-15.0	.022	34	19
5460	DR	(d)	NA	.....	570	3.15	14.0	70	5.65	5500	(e)	(f)	(p)	(q)	9	132	.438	DR	1115378	5.00	2.30	DR	1110227	2°-600	30.0°-2700	0°-5.00	6.0°-15.0	.022	34	19
Oldsmobile 88, Super 88, 98	DR	1107623	150	EH	460	5.20	11.0	95	10.10	3500	Sol	Tik	SgOC	F	9	176	.500	DR	1115082*	4.50	2.00	DR	1110843	0°-650	29.0°-3600	0°-5.50	20.0°-20.0	.016	30	21
Packard 5400, 5401	AL	MCL-6129	120	EH	650	3.00	15.4	.....	.....	.....	Sol	Tik	Ben	F	9	140	.500	AL	CR-4001A	.....	1.50	AL	1GP-4502E	0°-600	16.0°-3200	0°-6.00	10.0°-10.0	.015	27	19
5402, 5411	DR	1108027	120	EH	650	3.00	15.4	.....	.....	.....	Sol	Tik	SAS	F	9	140	.500	DR	1115376	.....	1.50	DR	1110841	0°-600	16.0°-3200	0°-5.70	12.0°-10.0	.015	31	21
5406	DR	1108027	120	EH	650	3.00	15.4	.....	.....	.....	Sol	Tik	SAS	F	9	158	.500	DR	1115376	.....	1.50	DR	1110848	0°-600	20.0°-1925	0°-6.00	18.0°-13.5	.015	31	21
5426	DR	1108027	120	EH	650	3.00	15.4	.....	.....	.....	Sol	Tik	SAS	F	9	140	.500	DR	1115376	.....	1.50	DR	1110848	0°-600	20.0°-1925	0°-6.00	18.0°-13.5	.015	31	21
5431	DR	1108027	120	EH	650	3.00	15.4	.....	.....	.....	Sol	Tik	SAS	F	9	(g)	.500	DR	1115376	.....	1.50	DR	1110848	0°-600	20.0°-1925	0°-6.00	18.0°-13.5	.015	31	21
Plymouth P25 (Early Models)	AL	MCH-6205	75	EH	335	2.00	6.0	65	5.00	4300	Sol	Tik	Ben	F	9	146	.375	AL	CR-4001	5.00	2.25	AL	1AT-4001	0°-350	9.0°-1300	1.0°-6.00	8.0°-14.0	.020	39	19
P25 (Late Models)	AL	MCH-6205	75	EH	335	2.00	6.0	65	5.00	4300	Sol	Tik	Ben	F	9	146	.375	AL	CR-4001	5.00	2.25	AL	1AT-4101B	0°-425	8.0°-1350	1.0°-6.00	8.0°-14.0	.020	39	19
Pontiac 5425	DR	1107107	121	RT	550	3.25	11.0	80	5.60	5500	Sol	Tik	SgOC	F	9	(h)	(i)	DR	1115378	4.20	2.40	DR	(j)	(k)	(l)	0°-5.00	12.0°-20.5	.016	26	21
5427, 5428	DR	1107957	118	RT	600	3.00	15.0	60	5.00	6000	Sol	Tik	SgOC	F	9	(h)	(i)	DR	1115378	4.20	2.40	DR	1110831	0°-250	11.0°-1925	0°-8.00	11.0°-20.0	.016	26	21
Studebaker 15G	AL	MZ-4157	100	EH	480	3.60	10.4	70	5.50	4300	Sol	(n)	Ben	F	9	124	.375	AL	CR-6007	5.50	2.00	AL	1AT-4010	0°-800	14.0°-2800	0°-4.00	18.0°-12.0	.020	39	19
5H, 5HY	DR	(m)	100	EH	525	3.40	12.0	65	5.70	5000	Sol	(n)	Ben	F	9	133	.375	DR	1115392	4.50	2.00	DR	1110839	0°-600	32.0°-2900	0°-5.00	16.0°-11.5	.013	31	19
Willys 6-226	AL	(o)	185	EW	335	2.00	6.0	65	5.00	4300	Sol	Tik	Ben	F	9	130	.500	AL	CR-6009	5.00	.....	AL	1AT-4019	0°-650	9.0°-1675	0°-10.00	5.0°-15.0	.020	39	19
685B	AL	MCH-6203	185	RT	335	2.00	6.0	65	5.00	4300	Sol	Tik	Ben	F	9	129	.375	AL	CR-6009	5.00	2.50	AL	1AT-4017A	0°-300	9.5°-1300	0°-5.00	12.0°-14.0	.020	39	19

ABBREVIATIONS

*—To be used in series with resistance unit 1927809.
†—Dwell meter for setting point opening is not recommended.
▲—Total dwell for both breakers; 26° to 28° dwell for each breaker.
(a)—1112388 with std. trans.; 1112396 with Powerglide.
(b)—1107125 with std. trans.; 1107126 with Hydramatic.
(c)—1107119 with std. trans.; 1107136 with Hydramatic.
(d)—1107950 with std. trans.; 1108029 with Hydramatic.
(e)—Manual with std. trans.; solenoid with Hydramatic.
(f)—Depress clutch pedal with std. trans.; move shift lever to neutral, then lift, with Hydramatic.
(g)—Pacific and convertible, 140; Carribbean, 158.
(h)—140 with std. trans.; 145 with Hydramatic.
(i)—.500 with std. trans.; .360 with Hydramatic.
(j)—1110235 with std. trans.; 1110234 with Hydramatic.
(k)—0°-400 with std. trans.; 0°-300 with Hydramatic.
(l)—11.5°-1800 with std. trans.; 11.0°-1950 with Hydramatic.
(m)—1107115 with std. trans.; 1107116 with Automatic Drive.
(n)—Depress clutch pedal with std. trans.; operate push button on dash with Automatic Drive.
(o)—MCH-6210 with std. trans.; MCH-6211 with Hydramatic.
(p)—Bendix with std. trans.; sliding gear with Hydramatic.
(q)—Rear with std. trans.; front with Hydramatic.
AL—Electric Auto-Lite Co.
Ben—Bendix.
Dap—Depress accelerator pedal.
DR—Delco-Remy Div.
Dsb—Depress starter button.
EH—Engine hot.
EW—Engine warm.
F—Front.
Fo—Ford Motor Co.
Hol—Holley Carburetor Co.
Luc—Lucas.
Man—Manual.
NA—Not available.
NR—Not recommended.
OC—Overrunning clutch.
Pbd—Push button on dash.
PuB—Pull button on dash.
R—Rear.
RT—Room temperature.
SAS—Solenoid actuated shift.
SG—Sliding gear.
SgOC—Sliding gear and overrunning clutch.
SOC—Solenoid and overrunning clutch.
Sol—Solenoid.
SsOC—Spiral spline and overrunning clutch.
Tik—Turn ignition key beyond "on" position.

(c)—1107119 with std. trans.; 1107136 with Hydramatic.

(d)—140 with std. trans.; 145 with Hydramatic.

(f)—.500 with std. trans.; .360 with Hydramatic.

trans.; operate push button on dash with Automatic Drive.

DR—Delco-Remy Div.
Dsb—Depress starter button.

OC—Overrunning clutch.
Pbd—Push button on dash.
PuB—Pull button on dash.

clutch.
Tik—Turn ignition key beyond "on" position.

IGNITION TIMING—SPARK PLUGS—CLUTCHES

PASSENGER CAR MAKE AND MODEL	IGNITION TIMING		SPARK PLUGS				CABLE				CLUTCH (PEDAL OPERATED)																	
																		Facing							Release Bearing		Torsional Dampening	
	C/s deg. @ RPM	Mark Location	Make and Model	Thread (mm)	Tightening Torque (ft. lb.)	Gap	Conductor Type	Insulation Type	Spark Plug Protector	Suppression Type	Make	Type	Fluid Coupling	Semi-centrifugal	Type Pressure Plate Springs	Total Plate Pressure	No. of Driven Discs	Material	Inside Diam. (In.)	Outside Diam. (In.)	Effective Area (Sq. in.)	Thickness (In.)	Number Required	Engagement Cushioning Method	Type	Method of Lubrication	Method	Friction Material
Buick																												
40	5BTC	FDP	AC-44-5	14	25	.033	SC	Ne	NMC	Dis,C,Gen,VR	Bui	DP	N	N	CrS	1350	1	Wov	6.0	10.0	100.6	.125	2	Spr	B	S	Spr	Wov
50, 60	5BTC	HB	AC-44-5	14	25	.033	SC	Ne	NMC	Dis,C,Gen,VR	Bui	DP	N	N	CoS	1680	1	Wov	6.5	10.5	106.8	.125	2	Spr	B	S	Spr	Wov
70	5BTC	HB	AC-44-5	14	25	.033	SC	Ne	NMC	Dis,C,Gen,VR	N																	
Cadillac																												
60, 62, 75		CrB	AC-46-5	14	23	.035		Ne	NB	R,Gen,C,VR	N																	
Chevrolet																												
1500, 2100, 2400	2ATC	Fly	AC-44-5	14	23	.036	LC	RN	NB	Cab	CB	DP	N	N	DS		1	WMA	6.1	9.1	71.9	.135	2	Spr	B	S	HS	
2900	2ATC	Fly	AC-44-5*	14	23	.036	LC	RN	NB	Gen,VR,Cab	N																	
Chrysler																												
C62	TDC	VD	AL-4S-140	14	31	.035	SC	RN	RB	SP,Dis	BB	DP	N	N	CoS	1505	1	WMA	6.0	10.0	100.5	.125	2	Sfc	B	S	CoS	
C63, C64, C66	4BTC	VD	AL-4GS-150	14	31	.035	SC	RN	ETC	SP,Dis	N																	
De Soto																												
S19	4BTC	VD	AL-4S-140	14	31	.035	SC	RN	NB	SP,Dis	BB	DP	N	N	CoS	1884	1	WMA	6.0	10.0	100.5	.125	2	Sfc	B	S	CoS	
S20	2BTC	VD	AL-4S-140	14	31	.035	SC	RN	NB	SP,Dis	BB	DP	N	N	CoS	1413	1	WMA	7.0	10.0	80.0	.125	2	Sfc	B	S	CoS	
Dodge																												
D50, D53	4BTC	FDP	AL-4S-140	14	31	.035	SC	RN	RB	SP,Dis	BB	DP	N	N	CoS	1505	1	WMA	6.0	10.0	100.5	.125	2	Sfc	B	S	CoS	
D51-1, D52	2BTC	FDP	AL-4S-140	14	31	.035	SC	RN	RB	SP,Dis	BB	DP	N	N	CoS	1335	1	WMA	7.0	10.0	80.0	.125	2	Sfc	B	S	CoS	
D51-2	2BTC	VD	AL-4S140	14	31	.035	SC	RN	RB	SP,Dis	BB	DP	N	N	CoS	1335	1	WMA	7.0	10.0	80.0	.125	2	Sfc	B	S	CoS	
Ford																												
6	3BTC	VD	Ch-H-10	14	28	.035	SC	Ne	NB		Lo	DP	N	Y	CoS	1230	1	WA	6.0	9.5	85.2	.125	2	TD	B	S	Spr	St
8	6BTC	CP	Ch-H-10	14	28	.035	SC	Ne	NB		Lo	DP	N	Y	CoS	1071	1	WA	6.8	10.0	85.5	.125	2	TD	B	S	Spr	St
Henry J																												
543	5BTC	CP	AL-A-7	14	28	.030	SC	Ne		DC	Ab	DP	N	N	CoS	948	1	MA	5.1	8.5	72.0	.135	2	FS	B	S	Spr	St
544	5BTC	VD	AL-A-7	14	28	.030	SC	Ne		DC	Ab	DP	N	N	CoS	948	1	MA	5.1	8.5	72.0	.135	2	FS	B	S	Spr	St
Hudson																												
1D, 2D, 3D	TDC	VD	Ch-H-10	14	28	.032	SC	Ne		DC	BB	DP	N	N	CoS	1242	1	Mou	6.1	9.1	71.9	.235	1	WS	B	S	Spr	S W
4D	TDC	Fly	Ch-H-10	14	28	.032	SC	Ne		DC	Hud	WP	N	N	CoS	2078	1	Cor	5.3	8.7	75.3	.233	90	OC	B	F	Spr	N
5D	TDC	Fly	Ch-H-10	14	28	.032	SC	Ne		DC	Hud	WP	N	N	CoS	2142	1	Cor	6.4	9.1	87.4	.203	108	OC	B	F	Spr	N
7D	TDC	Fly	Ch-H-11	14	28	.032	SC	Ne		DC	Hud	WP	N	N	CoS	2142	1	Cor	6.4	9.1	87.4	.203	108	OC	B	F	Spr	N
Kaiser																												
K542, K545	4BTC	VD	AL-A-7	14	28	.030	SC	Ne		DC	AB	DP	N	N	CoS	1470	1		6.0	9.3	78.0	.125	2	FS	B	S	Spr	St
Lincoln	3BTC	VD	Ch-H-10	14	28	.035	SC	Ne	NB		N																	
Mercury	3BTC	CP	Ch-H-10	14	28	.031	SC	Ne	NB		BB	DP	N	N	CoS	1535	1	WMA	6.5	10.3	98.6	.125	2	BS	B	S	Spr	St
Nash																												
541, 542	7BTC	CP	Ch-N-8-B	14	30	.024	SC	Ru	Ru	Gen	BB	DP	N	N	CoS	810	1	Mou	5.0	7.3	43.3	.125	2	Sfc	C R	N	Spr	St
5410	(a)	VD	AL-A-7A	14	30	.030	SC	Ne	N	Cab	BB	DP	N	N	CoS	1215	1		5.4	8.0	55.2	.125	2	Sfc	B	S	Spr	St
5440	4ATC	VD	AL-5B	14	30	.030	SC	Ne	N	Cab	BB	DP	N	N	CoS	1215	1		5.4	8.0	55.2	.125	2	Sfc	B	S	Spr	St
5460	TDC	VD	(b)	14	30	.030	SC	Ne	NB	Cab	BB	DP	N	N	CoS	1395	1		7.0	10.0	80.1	.125	2	Sfc	B	S	Spr	St
Oldsmobile																												
88, Super 88, 98	5BTC	CP	AC-46-5	14	26	.030	SC	Ne	SS	R	Lo	DP	N	Y	CpS	1100	1	WM	7.0	11.0	56.5	.136	2	FS	B	F	Spr	St
Packard																												
5400	6BTC	VD	Ch-J-8	14	28	.028	SC	Ne	Ne	IS,Gen,Cab	Lo	DP	N	Y	CoS	1386	1	WA	6.8	10.0	85.5	.125	2	TD	B	S	Spr	MA
5401, 5402, 5411	6BTC	VD	Ch-J-8	14	28	.028	SC	Ne	Ne	IS,Gen,Cab†,R	Lo	DP	N	Y	CoS	1467	1	WA	7.0	10.5	96.2	.125	2	TD	B	S	Spr	MA
5406	TDC	VD	Ch-J-8	14	28	.028	SC	Ne	Ne	IS,Gen,R	N																	
5426, 5431	TDC	VD	Ch-J-8	14	28	.028	SC	Ne	Ne	IS,Gen,R	Lo▲	DP	N	Y	CoS	1467	1	WA	7.0	10.5	96.2	.125	2	TD	B	S	Spr	MA
Plymouth																												
P25 (Early Models)	2BTC	FDP	AL-4S-140	14	31	.035	SC	RN	N	SP,DC	AB	DP	N	N	CoS	(e)	1	WMA	6.0	9.3	77.8	(d)	2	Sfc	B	S	CoS	
P25-1 (Late Models)	2BTC	FDP	AL-4S-140	14	31	.035	SC	RN	N	SP,DC	AB	DP	N	N	CoS	(c)	1	WMA	6.0	9.3	77.8	(d)	2	Sfc	B	S	CoS	
P25-2, 3 (Late Models)	2BTC	VD	AL-4S-140	14	31	.035	SC	RN	N	SP,DC	AB	DP	N	N	CoS	(c)	1	WMA	6.0	9.3	77.8	(d)	2	Sfc	B	S	CoS	
Pontiac																												
5425	3BTC	HB	AC-44-5	14	28	.026		Ne	RB	Cab,Eng,Wh,Gen,VR	IL	DP	N	N	DS	1462	1	MA	6.0	9.5	85.2	.125	2	Spr	B	S	CoS	AS
5427, 5428	(e)	HB	AC-44-5	14	28	.026		Ne	RB	Cab,Eng,Wh,Gen,VR	IL	DP	N	N	DS	1462	1	MA	6.8	10.0	85.8	.125	2	Spr	B	S	CoS	AS
Studebaker																												
15G	2BTC	VD	Ch-J-7	14	28	.031		Ne	Ss	C,Gen,DC	BB	DP	N	N	CoS	1100	1	MA	5.1	8.0	55.2	.125	2	PS	B	S	CoS	S W
5H, 5HY	4BTC	VD	Ch-H-11	14	28	.036		Ne	Ss	C,Gen,R	BB	DP	N	N	CoS	1325	1	MA	6.0	9.3	78.0	.125	2	PS	B	S	CoS	SW
Willys																												
6-226	5BTC	VD	Ch-J-8	14	29	.030	SC	Ne		Dis,Gen	AB	DP	N	N	CoS	1470	1		6.0	9.3	78.0	.125	2	FS	B	S	Spr	St
685B	5BTC	VD	Ch-J-8	14	29	.030	SC	Ne			RA	DP	N	N	CoS	(f)	1	Wov	5.1	8.5	72.0	.135	2	FS	B	S	CoS	

ABBREVIATIONS

*—AC-43-5 COM optional use for continuous high speed operation.
†—5401 model only.
▲—Pacific and convertible only have a clutch; Carribbean has none.
(a)—TDC with std. trans.; 4ATC with Hydramatic.
(b)—AL-A-7A on 5460 models; AL-5B on 5460 models with Le Mans Dual Jetfire engine.
(c)—Borg & Beck, 1321; Auburn, 1367.
(d)—Borg & Beck, .125; Auburn, .115.
(e)—6BTC with std. trans.; 3BTC with Hydramatic.
(f)—Rockford, 990; Auburn, 1035.

Ab—Auburn pressure plate, Borg & Beck driven plate.
AB—Auburn or Borg & Beck.
AC—A.C. Spark Plug Div.
AL—Electric Auto-Lite Co.
AS—Asbestos on steel.
ATC—After top center.
B—Ball bearing.
BB—Borg & Beck Div.
BS—Borglite disc with spring vibration damper.
BTC—Before top center.
Bui—Buick Motor Div.
C—Coil.
Cab—High tension cables.
CB—Chevrolet or Borg & Beck.
Ch—Champion Spark Plug Co.
Cor—Cork. **CoS**—Coil springs.
CP—Crankshaft pulley.
Cps—Compression springs.
CR—Carbon ring.
CrB—Crankshaft balancer.
CrS—Crown spring.
DC—Distributor cap.
Dis—Distributor.
DP—Dry plate.
DS—Diaphragm spring.
Eng—Engine.
ETC—Enclosed tubes covered.
F—Grease fitting.
FDP—Fandrive pulley.
Fly—Flywheel.
FS—Flat springs.
Gen—Generator.
HB—Harmonic balancer.
HS—Helical springs.
Hud—Hudson Motor Car Co.
IL—Inland with Long driven member.
IS—Ignition switch.
LC—Linen core impregnated with an electrical conducting material.
Lo—Long Mfg. Div.
MA—Moulded asbestos.
Mou—Moulded.
N—No or none.
NB—Neoprene boot.
Ne—Neoprene.
NMC—Neoprene boot and sheet metal cover.
OC—Oil cushion.
PS—Plate springs.
R—Rotor. **RB**—Rubber boot
RA—Rockford or Auburn.
RN—Rubber with neoprene jacket.
Ru—Rubber.
S—Sealed.
SC—Stranded copper.
Sfc—Springs, flat crimped.
SP—Spark plugs.
Spr—Springs.
Ss—Semi skirt integral with cable.
SS—Silicone sleeve.
St—Steel.
SW—Steel washer.
TD—Torbend disc, with spring vibration damper.
TDC—Top dead center.
VD—Vibration damper.
VR—Voltage regulator.
WA—Woven asbestos. **Wh**—Wheels.
WM—Woven moulded.
WMA—Woven or moulded asbestos.
Wov—Woven.
WP—Wet plate.
WS—Waved spring steel plate.
Y—Yes.

LIGHT BULBS—FUSES—CIRCUIT BREAKERS

PASSENGER CAR MAKE AND MODEL	LAMP BULBS (Trade Number)															FUSES AND CIRCUIT BREAKERS (Trade Number)											
						Direction Indicator																						
	Headlamp	Headlamp Beam Indicator	Parking Light	Tail Light	Stop Light	Front	Rear	Tell Tale	License Plate Light	Instrument Light	Ignition Lock Light	Dome Light	Clock Light	Courtesy Light	Trunk Compartment Light	Headlamp	Headlamp Beam Indicator	Parking Light	Tail Light	Stop Light	Direction Indicator	License Plate Light	Instrument Light	Ignition Light	Dome Light	Cloak	Clock Light	Courtesy Light	Trunk Compartment Light
Buick 40, 50, 60, 70	4400	53	1034	1034	(a)	(b)	1073	53	67	57	57	1004	57	N	89	25CB	(c)	(c)	(c)	SFE9	(d)	(c)	(c)	(c)	SFE20	AGA2	(c)	N	(e)
Cadillac 60, 62	4400	57	1034	1034	1034	(b)	(a)	57	67	57	53	1004	57	N	89	22CB	(c)	(c)	(c)	(c)	SFE6	(c)	(c)	(c)	(c)	(c)	(c)	N	(c)
75	4400	57	1034	1034	1034	(b)	(a)	57	67	57	53	90	57	90	89	22CB	(c)	(c)	(c)	(c)	SFE6	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Chevrolet 1500, 2100, 2400	2400	51	1154	1154	(a)	(b)	(a)	55	63	55	51	210	63	82	87	30CB	(c)	(c)	(c)	(c)	SFE14	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
2900	2400	51	1154	1154	(a)	(b)	(a)	51	63	55	51	N	55	82	N	30CB	(c)	(c)	(c)	(c)	SFE14	(c)	(c)	(c)	N	(c)	(c)	(c)	N
Chrysler C62, C63	2422	51	1154	1154	(a)	(b)	(d)	55	63	55	51	B-6	55	B-6	87	30CB	(c)	(c)	(c)	(c)	N	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
C64	2422	51	1154	63	1154	(b)	(d)	55	63	55	51	B-6	55	B-6	87	30CB	(c)	(c)	(c)	(c)	N	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
C66	2425	57	1034	1034	(a)	(b)	(d)	57	67	57	53	94	57	N	93	30CB	(c)	(c)	(c)	(c)	N	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
De Soto S19	2422	55	1154	1154	(a)	(b)	(a)	55	63	55	51	88	55	87	88	30CB	(c)	(c)	(c)	(c)	N	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
S20	2422	55	1154	1154	(a)	(b)	(a)	55	63	55	51	88	55	87	N	30CB	(c)	(c)	(c)	(c)	N	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Dodge D50, D51	2422	55	63	1154	(a)	1154	(a)	55	63	55	51	88	55	N	81	30CB	(c)	(c)	(c)	(c)	N	(c)	(c)	(c)	(c)	SFE3	(c)	N	(c)
D52, D53	2422	55	63	1154	(a)	1154	(a)	55	63	55	51	88	55	87	81	30CB	(c)	(c)	(c)	(c)	N	(c)	(c)	(c)	(c)	SFE3	(c)	N	(c)
Ford	4030	51	1154	1154	(a)	(b)	(a)	51	63	55	55	209	55	63	81	30CB	(c)	15CB	(b)	(b)	SFE14	(b)	(b)	(b)	SFE14	(f)	(b)	(e)	(b)
Henry J 543, 544	4030	51	63	1154	(a)	1154	(a)	51	63	55	N	87	N	81	N	SFE30	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	N	(c)	N	N	(c)	N
Hudson 1D	4030	55	63	1154	1154	1154	(a)	55	63	55	N	87	55	N	87	25CB	(c)	20CB	(b)	(b)	N	(b)	(b)	N	(b)	SFE3	(b)	N	(b)
2D, 3D	4030	55	63	1154	1154	1154	(a)	55	63	55	N	87	55	87	87	25CB	(c)	20CB	(b)	(b)	N	(b)	(b)	N	(b)	SFE3	(b)	N	(b)
4D	4030	55	63	1154	1154	1154	(a)	55	63	55	55	87	55	N	87	25CB	(c)	20CB	(b)	(b)	N	(b)	(b)	(b)	(b)	SFE3	(b)	N	(b)
5D, 7D	4030	55	63	1154	1154	1154	(a)	55	63	55	55	87	55	87	87	25CB	(c)	20CB	(b)	(b)	N	(b)	(b)	(b)	(b)	SFE3	(b)	(b)	(b)
Kaiser K542, K545	4030	51	1154	(h)	(i)	(b)	(d)	51	63	55	51	N	55	81	81	30CB	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	N	(c)	(c)	(c)	(c)
Lincoln Custom	4030	51	1154	1154	(a)	(b)	(a)	51	63	55	(j)	209	(j)	63	63	30CB	(c)	15CB	(b)	(b)	SFE14	(b)	(b)	(b)	SFE14	(f)	(b)	(e)	(b)
Special Custom	4030	51	1154	1154	(a)	(b)	(a)	51	63	55	(j)	63	(j)	63	63	30CB	(c)	15CB	(b)	(b)	SFE14	(b)	(b)	(b)	SFE14	(f)	(b)	(e)	(b)
Mercury	4030	51	1154	1154	(a)	(b)	(a)	51	63	55	55	209	55	63	63	30CB	(c)	15CB	(b)	(b)	SFE14	(b)	(b)	(b)	SFE14	(f)	(b)	(e)	(b)
Nash 541, 542	4430	987	1016	1016	(a)	(b)	1141	970	57	987	N	N	N	57	N	3AG30	(c)	(c)	(c)	3AG30	(d)	(c)	(c)	N	N	N	N	(c)	N
5410	4030	51	1154	1154	(a)	(b)	(a)	51	63	55	N	81	55	55	N	AGC30	(c)	(c)	(c)	SFE30	(d)	(c)	(c)	N	(c)	N	(c)	(c)	N
5440, 5460	4030	51	1154	1154	(a)	(b)	(a)	51	63	51	N	81	(j)	(g)	N	30CB	(c)	(c)	(c)	20CB	(d)	(c)	(c)	(c)	(c)	N	(c)	N	N
Oldsmobile 88, Super 88	4400	53	1034	1034	(a)	(b)	(a)	57	67	57	57	1004	57	90	89	25CB	(c)	(c)	SFE9	SFE20	SFE9	(a)	AGA2	(a)	(d)	AGA1	AGA2	(d)	(a)
98	4400	53	1034	1034	(a)	(b)	(a)	57	67	57	57	90	57	90	89	25CB	(c)	(c)	SFE9	SFE20	SFE9	(a)	AGA2	(a)	AGC25	AGA1	AGA2	(d)	(a)
Packard 5400, 5401, 5411	4030	51	1154	1154	(a)	(b)	(d)	51	63	55	55	210	(j)	82*	81	30CB	(c)	(c)	(c)	(c)	10CB	30CB	(c)	(c)	(c)	(d)	AGA3	(c)	(d)	(d)
5402, 5406, 5426, 5431	4030	51	1154	(k)	1154	(b)	(d)	51	63	55	55	210	(j)	82*	81	30CB	(c)	(c)	(c)	(c)	10CB	30CB	(c)	(c)	(c)	(d)	AGA3	(c)	(d)	(d)
Plymouth P25	2422	55	63	1154	(a)	1154	(a)	55	63	55	51	88	55	87	81	30CB	(c)	(c)	(c)	(c)	N	(c)	(c)	(c)	(c)	SFE3	(c)	(c)	(c)
Pontiac 5425, 5427, 5428	4030	51	63	1154	(a)	1154	(a)	51	63	55	51	(l)	55	82	87	42CB	(c)	(c)	(m)	SFE14	SFE20	(a)	(a)	(a)	(d)	SFE20	(a)	(n)	(d)
Studebaker 15G, 5H, 5HY	4030	51	63	1154	(a)	1158	(a)	51	63	51	N	88	51	88	63	30CB	(c)	(c)	(c)	20CB	SFE14	(c)	(c)	N	(d)	SFE3	(c)	(d)	(c)
Willys 6-226	4030	51	63	1154	(a)	1158	(d)	51	63	55	N	87	55	81	N	30CB	(c)	(c)	(c)	(c)	SFE14	(c)	(c)	N	(c)	.....	(c)	(c)	N
685B	4030	51	62	1154	(a)	1158	(d)	51	63	55	N	87	55	81	N	30CB	(c)	(c)	(c)	(c)	SFE14	(c)	(c)	N	(c)	.....	(c)	(c)	N

ABBREVIATIONS

*—Map light which serves as illumination for courtesy lights.
(a)—Same as tail light.
(b)—Same as parking light.
(c)—Same as headlamp.
(d)—Same as stop light.
(e)—Same as dome light.
(f)—SFE2 or SFE3.
(h)—1158 and 87.
(i)—Same as tail light but with 1129 bulbs in extension also.
(j)—Same as instrument lights.
(k)—1154 and 63.
(l)—All sedan models, 210; Catalina and convertible, 82.
(m)—Same circuit as headlamp but with SFE14 fuse also.
(n)—Same circuit as clock for sedan models; same circuit as stop light for Catalina and convertible.
CB—Circuit breaker.
N—No or none.

TRANSMISSIONS—CONVENTIONAL—WITH OVERDRIVE

PASSENGER CAR MAKE AND MODEL	TYPE			CONVENTIONAL TRANSMISSION														OVERDRIVE											
					Ratios									Lubricant							Lubricant								
	Conventional	Conventional with O.D.	Automatic	No. of Forward Speeds	First	Second	Third	Reverse	Constant Mesh Gears in 2nd	Spur Gear Used In	Helical Gears Used In	Synchronous Meshing in 2nd and 3rd Gears	Capacity (pt.)	Type Recommended	SAE Viscosity Number: Summer	SAE Viscosity Number: Winter	SAE Viscosity Number: Extreme Cold	Type	If Planetary—No. of Pinions	Manual Lockout	Downshift Accelerator Control	Minimum Cut-in Speed (mph)	Gear Ratio (to—1)	Capacity (pt.)	Separate Filter	Type Recommended	SAE Viscosity Number: Summer	SAE Viscosity Number: Winter	SAE Viscosity Number: Extreme Cold
Buick 40	Std	NA	Opt	3	2.67	1.66	1.00	3.02	Y	N	AS	Y	1¾	MP	90	90	90	NA											
Buick 50, 60	Std	NA	Opt	3	2.39	1.53	1.00	2.53	Y	N	AS	Y	2½	MP	90	90	90	NA											
Buick 70	NA	NA	Std	NA														NA											
Cadillac 60, 62, 75	NA	NA	Std	NA														NA											
Chevrolet 1500, 2100, 2400	Std	NA	Opt	3	2.94	1.68	1.00	2.94	Y	N	AS	Y	1½	PM	90	90	80	NA											
Chevrolet 2900	NA	NA	Std	NA														NA											
Chrysler C62	Std	NA	Opt	3	2.57	1.83	1.00	3.48	Y	N	AS	Y	2¾	EO	10W	10W	10W	NA											
Chrysler C63, C64, C66	NA	NA	Std	NA														NA											
De Soto S19, S20	Std	Opt	Opt	3	2.57	1.83	1.00	3.48	Y	N	AS	Y	2¾	EO	10W	10W	10W	P	3	Y	Y	28	.700	¾	N	EO	10W	10W	10W
Dodge D50, D53	Std	Opt	Opt	3	2.57	1.83	1.00	3.48	Y	N	AS	Y	2¾	EO	10W	10W	10W	P	3	Y	Y	26	.700	¾	N	EO	10W	10W	10W
Dodge D51	Std	Opt	Opt	3	2.57	1.83	1.00	3.48	Y	N	AS	Y	2¾	EO	10W	10W	10W	P	3	Y	Y	25	.700	¾	N	EO	10W	10W	10W
Dodge D52	Std	Opt	NA	3	2.57	1.83	1.00	3.48	Y	N	AS	Y	2¾	EO	10W	10W	10W	P	3	Y	Y	25	.700	¾	N	EO	10W	10W	10W
Ford	Std	Opt	Opt	3	2.78	1.61	1.00	3.64	Y	N	AS	Y	3	ME	80	80	80	P	3	Y	Y	27	.700	1½	N	ME	80	80	80
Henry J 543, 544	Std	Opt	NA	3	2.61	1.63	1.00	3.54	Y	N	AS	Y	1½	TG	90	80	80	P	3	Y	Y	29	.700	¾	Y	TG	90	80	80
Hudson 1D, 2D, 3D	Std	Opt	Opt	3	2.61	1.63	1.00	3.54	Y		AS	Y	1½	ME	90	80		P	3	Y	Y		.700	1	N	ME	90	80	
Hudson 4D, 5D, 7D	Std	Opt	Opt	3	2.57	1.68	1.00	3.49	Y		AS	Y	2¼	ME	90	80		P	3	Y	Y		.700	¾	N	ME	90	80	
Kaiser K542, K545	Std	Opt	Opt	3	2.57	1.55	1.00	3.49	Y	N	AS	Y	2½	TG	90	80	80	P	3	Y	Y	24	.700	1	Y	TG	90	80	80
Lincoln	NA	NA	Std	NA														NA											
Mercury	Std	Opt	Opt	3	2.63	1.63	1.00	3.25	Y	N	AS	Y	3	ME	80	80	80	P	3	Y	Y	27	.700	1½	N	ME	80	80	80
Nash 541, 542	Std	NA	NA	3	2.44	1.54	1.00	3.49	Y	R	1,2	Y	3½	MO	40	30	20	NA											
Nash 5410	Std	Opt	Opt	3	2.61	1.63	1.00	3.54	Y	N	1,2,R	Y	1½	MO	90	80		P	3	Y	Y	25	.700	1¼	N	MO	90	80	
Nash 5440	Std	Opt	Opt	3	2.57	1.62	1.00	3.48	Y	N	1,2,R	Y	2¼	MO	90	80		P	3	Y	Y	25	.700	1¼	N	MO	90	80	
Nash 5460	Std	Opt	Opt	3	2.57	1.55	1.00	3.49	Y	N	1,2,R	Y	2¼	MO	90	80		P	3	Y	Y	25	.700	1¼	N	MO	90	80	
Oldsmobile 88, Super 88, 98	Std	NA	Opt	3	2.39	1.53	1.00	2.53	Y	N	AS	Y	2½	MP	80	80	80	NA											
Packard 5400, 5401, 5411, 5402, 5426, 5431	Std*	Opt*	Opt†	3	2.43	1.53	1.00	3.16	Y	R	1,2	Y	2	MO	90	90	80	P	4	Y	Y	22	.722	1¼	Y	MO	90	90	80
Packard 5406	NA	NA	Std	NA														NA											
Plymouth P25	Std	Opt	Opt	3	2.57	1.83	1.00	3.48	Y	N	AS	Y	2¾	GL	80	80	80	P	3	Y	Y	25	.700	¾	N	GL	80	80	80
Pontiac 5425, 5427, 5428	Std	NA	Opt	3	2.66	1.66	1.00	3.02	Y	N	AS	Y	1¾	EP	80-90	80-90	80-90	NA											
Studebaker 15G	Std	Opt	Opt	3	2.61	1.63	1.00	3.54	Y	N	AS	Y	1½	MO	90	90	90	P	3	Y	Y	25	.700	1¼	N	MO	90	90	90
Studebaker 5H, 5HY	Std	Opt	Opt	3	2.57	1.55	1.00	3.48	Y	N	AS	Y	2½	MO	90	90	90	P	3	Y	Y	25	.700	1	N	MO	90	90	90
Willys 6-226	Std	Opt	Opt	3	2.57	1.55	1.00	3.49	Y	N	AS	Y	2½	TG	90	80	80	P	3	Y	Y	24	.700	1	Y	TG	90	80	80
Willys 685B	Std	Opt	NA	3	2.61	1.63	1.00	3.54	Y	N	AS	Y	1½	TG	90	80	80	P	3	Y	Y	26	.700	¾	Y	TG	90	80	80

ABBREVIATIONS

*—Not available on 5431 Carribbean model.
†—Standard on 5431 Carribbean model.
AS—All speeds.
EO—Engine oil.
EP—Extreme pressure gear lubricant.
GL—Gear lubricant.
ME—Mild extreme pressure gear lubricant.
MO—Mineral oil.
MP—"Multi-Purpose" gear lubricant.
N—No or none.
NA—Not available.
Opt—Optional.
P—Planetary.
PM—"Multi-Purpose" gear lubricant or mineral oil.
R—Reverse.
Std—Standard.
TG—Transmission gear lubricant.
Y—Yes

AUTOMATIC TRANSMISSIONS

PASSENGER CARS MAKE AND MODEL	TRADE NAME	Type	Manual Selector Positions (left to right)	GEAR RATIOS: 1st or Low Range	2nd or Drive Range	3rd or Intermediate Range	4th Speed	Reverse	Shifting Within Drive Range by Accelerator and Governor	Governor-Forced Shift	Downshift Up to (mph)	TORQUE CONVERTER: Number of Elements	Max. Ratio at Stall at Engine RPM	Mechanical Lockup: Provided	Speed Range (mph)	Releases at (mph)	Type of Cooling	Anti-Creep Device	LUBRICATION: Capacity—Refill (qt.)	Type Recommended	Grade (S A E. No.): Summer	Winter	Extreme Cold
Buick 40, 50, 60, 70	Dynaflow	TCG	P,Nu,D,L,R	1.82*	1.82*	1.00*	N	1.82*	N	N	40	4	2.45-1700	N			WC	N	10	(a)	(a)	(a)	(a)
Cadillac 60, 62, 75	Hydramatic	FCG	Nu,D,L,R	3.82	2.63	1.45	1.00	4.03	Y	Y	(b)	N							11	(a)	(a)	(a)	(a)
Chevrolet 1500, 2100, 2400	Powerglide	TCG	P,Nu,D,L,R	1.82*	1.82*	1.00*	N	1.82*	Y	Y	42	3	2.10-....	N			WC	N	11	(a)	(a)	(a)	(a)
2900	Powerglide	TCG	P,Nu,D,L,R	3.82*	1.82*	1.00*	N	3.82*	Y	Y	48	3	2.10-....	N			N	N	8	(a)	(a)	(a)	(a)
Chrysler C62	Powerflite	TCG	R,Nu,D,L	1.72*	1.72*	1.00*	N	2.39*	N	Y	55	4	2.50-1320	N			WC	N	12	(a)	(a)	(a)	(a)
C63, C64, C66	Powerflite	TCG	R,Nu,D,L	1.72*	1.72*	1.00*	N	2.39*	N	Y	55	4	2.60-1510	N			WC	N	12	(a)	(a)	(a)	(a)
De Soto S19	Powerflite	TCG	R,Nu,D,L	1.72*	1.72*	1.00*	N	2.39*	N	Y	55	4	2.60-1325	N			WC	N	12	(a)	(a)	(a)	(a)
S20	Powerflite	TCG	R,Nu,D,L	1.72*	1.72*	1.00*	N	2.39*	N	Y	55	4	2.60-1210	N			AC	N	12	(a)	(a)	(a)	(a)
Dodge D51-1	Gyro-Matic	FCC	R,L,Nu,D	3.57	2.04	1.75	1.00	3.99	Y	Y	40	N							3	EO	10	10	10
D50, D53	Powerflite	TCG	R,Nu,D,L	1.72*	1.72*	1.00*	N	2.39*	Y	Y	55	4	2.60-1455	N			AC	N	10	(a)	(a)	(a)	(a)
D51-2	Powerflite	TCG	R,Nu,D,L	1.72*	1.72*	1.00*	N	2.39*	Y	Y	55	4	2.60-1340	N			AC	N	10	(a)	(a)	(a)	(a)
D52	Not Available																						
Ford 6	Fordomatic	TCG	P,R,Nu,D,L	2.44*	1.48*	1.00*	N	2.44*	Y	Y	62	3	2.10-1450	N			AC	N	9½	(a)	(a)	(a)	(a)
8	Fordomatic	TCG	P,R,Nu,D,L	2.44*	1.48*	1.00*	N	2.44*	Y	Y	59	3	2.10-1500	N			AC	N	9½	(a)	(a)	(a)	(a)
Henry J 543, 544	Not Available																						
Hudson 1D, 2D, 3D	Hydramatic	FCG	Nu,D,L,R	3.82	2.63	1.45	1.00	4.30	Y	Y	52	N							8½	(a)	(a)	(a)	(a)
4D, 5D, 7D	Hydramatic	FCG	Nu,D,L,R	3.82	2.63	1.45	1.00	4.30	Y	Y	52	N							11	(a)	(a)	(a)	(a)
Kaiser K542, K545	Hydramatic	FCG	Nu,D,L,R	3.82	2.63	1.45	1.00	4.30	Y	Y	55	N							11	(a)	(a)	(a)	(a)
Lincoln	Hydramatic	FCG	Nu,D,L,R	3.82	2.63	1.45	1.00	4.30	Y	Y	60	N							11	(a)	(a)	(a)	(a)
Mercury	Mercomatic	TCG	P,R,Nu,D,L	2.44*	1.48*	1.00*	N	2.00*	Y	Y	62	3	2.10-1500	N			AC	N	9½	(a)	(a)	(a)	(a)
Nash 541, 542	Not Available																						
5410, 5440	Hydramatic	FCG	Nu,D,L,R	3.82	2.63	1.45	1.00	4.30	Y	Y	58	N							8½	(a)	(a)	(a)	(a)
5460	Hydramatic	FCG	Nu,D,L,R	3.82	2.63	1.45	1.00	4.30	Y	Y	58	N							11	(a)	(a)	(a)	(a)
Oldsmobile 88, Super 88, 98	Hydramatic	FCG	Nu,D,S,L,R	3.82	2.63	1.45	1.00	4.30	Y	Y	65	N							10½	(a)	(a)	(a)	(a)
Packard 5400	Ultramatic	TCG	P,Nu,H,L,R	1.82*	1.00*	N	N	1.64*	Y	Y	55	4	2.55-1400	Y	15-55	14	WC	N	12	(a)	(a)	(a)	(a)
5401, 5402, 5411	Ultramatic	TCG	P,Nu,H,L,R	1.82*	1.00*	N	N	1.64*	Y	Y	55	4	2.55-1500	Y	15-55	14	WC	N	12	(a)	(a)	(a)	(a)
5406, 5426, 5431	Ultramatic	TCG	P,Nu,H,L,R	1.82*	1.00*	N	N	1.64*	Y	Y	55	4	2.55-1550	Y	15-55	14	WC	N	12	(a)	(a)	(a)	(a)
Plymouth P25	Hy-Drive	TCT	(c)	2.37*	1.68*	1.00*	N	3.46*	N	N	N	4	2.60-1290	N			OC	N	5†	EO			
P25	Powerflite	TCG	R,Nu,D,L	1.72*	1.72*	1.00*	N	2.39*	N	Y	55	4	2.60-1335	N			AC	N	10	(a)			
Pontiac 5425, 5427, 5428	Hydramatic	FCG	Nu,D,L,R	3.82	2.63	1.45	1.00	4.30	Y	Y	60▲	N							11	(a)	(a)	(a)	(a)
Studebaker 15G	Automatic Drive	TCG	P,Nu,D,L,R	2.31*	1.43*	1.00*	N	2.00*	Y	Y	48	3	2.15-1600	Y	21●	18	AC	Y	9½	(a)	(a)	(a)	(a)
5H, 5HY	Automatic Drive	TCG	P,Nu,D,L,R	2.31*	2.31*	1.43*	1.00	2.00*	Y	Y	60	3	2.15-1650	Y	18●	15	AC	Y	9½	(a)	(a)	(a)	(a)
Willys 6-226	Hydramatic	FCG	Nu,D,L,R	3.82	2.63	1.45	1.00	4.30	Y	Y	55	N							11	(a)	(a)	(a)	(a)
685B	Not Available																						

ABBREVIATIONS

*—Plus torque converter ratio.
†—Engine and torque converter have a combined oil system requiring five quarts for each.
▲—Fourth to third.
●—And up.
(a)—Type "A" automatic transmission fluid.
(b)—Fourth to third, 70; third to second, 25.
(c)—Standard "H" shift.
AC—Air cooled.
D—Drive.
EO—Engine oil.
FCC—Fluid coupling with countershaft transmission.
FCG—Fluid coupling with gears.
H—High.
L—Low.
N—No or none.
Nu—Neutral.
OC—Oil cooled.
P—Park.
R—Reverse.
S—Super performance.
TCG—Torque converter with planetary gears.
TCT—Torque converter with three-speed transmission.
WC—Water cooled.
Y—Yes.

combined oil system requiring five quarts for each.
▲—Fourth to third.

(b)—Fourth to third, 70; third to second, 25.
(c)—Standard "H" shift.

FCC—Fluid coupling with countershaft transmission.
FCG—Fluid coupling with gears.

Nu—Neutral.
OC—Oil cooled.
P—Park.

gears.
TCT—Torque converter with three-speed transmission.

PROPELLER SHAFT—REAR AXLE

PASSENGER CAR MAKE AND MODEL	PROPELLER SHAFT										REAR AXLE													
			Intermediate Bearing		Universals								Gearing								Lubricant			
								Bearing					Ratios			No of Teeth—Ring and Pinion						SAE Viscosity Number	
	Number Used	Type	Type	Lubrication	Make	Number Used	Type	Type	Lubrication	Drive Taken Through	Torque Taken Through	Type	Gear Type	Conventional (to —1)	Overdrive (to —1)	Automatic (to —1)	Conventional	Overdrive	Automatic	Pinion Adjustment	Pinion Bearing Adjustment	Capacity (Pt.)	Type Recommended	Summer	Winter	Extreme Cold
Buick 40	1	TT	N	.....	Sag,Sp	1	Cr	Bu	AT	TT	TT	SF	Hy	3.90	N	3.60	43-11	N	43-12	Sh	N	4½	HG	90	90	80
50, 60	1	TT	N	.....	Sag,Sp	1	Cr	Bu	AT	TT	TT	SF	Hy	3.90	N	3.40	43-11	N	41-12	Sh	N	4½	HG	90	90	80
70	1	TT	N	.....	Sag,Sp	1	Cr	Bu	AT	TT	TT	SF	Hy	N	N	3.40	N	N	41-12	Sh	N	4½	HG	90	90	80
Cadillac 60, 62	1	Ex	N	.....	Mec,Sag	2	CT	Ne	P	RS	RS	SF	Hy	N	N	(a)	N	N	(a)	N	CS	5	HG	90	90	80
75	2	Ex	AF	P	Mec	3	CT	Ne	P	RS	RS	SF	Hy	N	N	3.77	N	N	34-9	N	CS	5	HG	90	90	80
Chevrolet 1500, 2100, 2400	1	TT	N	.....	Chev	1	YT	Pl	AT	RS	TT	SF	Hy	3.70	N	3.55	.....	N	.....	Sh	N	3½	HM	90	90	80
2900	1	Ex	N	.....	Chev	2	YT	AF	F	RS	RS	SF	Hy	N	N	3.55	N	N	.....	Sh	N	3½	HM	90	90	90
Chrysler C62	1	Ex	N	.....	NA	2	Cr	AF	P	RS	RS	SF	Hy	3.90	N	3.73	39-10	N	41-11	SS	Sh	3¼	EH	90	90	80
C63	1	Ex	N	.....	NA	2	(b)	AF	P	RS	RS	SF	Hy	N	N	3.36	N	N	37-11	SS	Sh	3½	EH	90	90	80
C64	1	Ex	N	.....	NA	2	(b)	AF	P	RS	RS	SF	Hy	N	N	3.54	N	N	39-11	SS	Sh	3½	EH	90	90	80
C66	2	Ex	AF	P	NA	3	Cr	AF	P	RS	RS	SF	Hy	N	N	3.54	N	N	39-11	N	SS	5	EH	90	90	80
De Soto S19	1	Ex	N	.....	NA	2	Cr	AF	P	RS	RS	SF	Hy	3.73	4.10	3.54	41-11	41-10	39-11	SS	Sh	3½	EH	90	90	80
S20	1	Ex	N	.....	NA	2	Cr	AF	P	RS	RS	SF	Hy	3.90	4.30	3.73	39-10	43-10	41-11	SS	Sh	3¼	EH	90	90	80
Dodge D50-1	1	Ex	N	.....	NA	2	BT	AF	P	RS	RS	SF	Hy	3.73	4.10	3.54	41-11	41-10	39-11	SS	Sh	3¼	EH	90	90	80
D50-2, 3, D53	1	Ex	N	.....	NA	2	BT	AF	P	RS	RS	SF	Hy	3.90	4.10	3.54	39-10	41-10	39-11	SS	Sh	3¼	EH	90	90	80
D51-1	1	Ex	N	.....	NA	2	BT	AF	P	RS	RS	SF	Hy	3.90	4.30	(d)	39-10	43-10	(d)	SS	Sh	3¼	EH	90	90	80
D51-2	1	Ex	N	.....	NA	2	BT	AF	P	RS	RS	SF	Hy	3.90	4.30	3.73	39-10	43-10	41-11	SS	Sh	3¼	EH	90	90	80
D52	1	Ex	N	.....	NA	2	BT	AF	P	RS	RS	SF	Hy	3.90	4.30	N	39-10	43-10	N	SS	Sh	3¼	EH	90	90	80
Ford 6	1	Ex	N	.....	Mec	2	(f)	Ne	P	RS	RS	SF	Hy	(g)	(h)	(i)	(g)	(h)	(i)	Sh	CS	3½	HE	90	90	80
8	1	Ex	N	.....	Mec	2	(f)	Ne	P	RS	RS	SF	Hy	(g)	(h)	(j)	(g)	(h)	(j)	Sh	CS	3½	HE	90	90	80
Henry J 543	1	Ex	N	.....	UP,Sp	2	(8)	AF	(l)	RS	RS	SF	Hy	4.27	(9)	N	47-11	(9)	N	Sh	Sh	2½	HG	90	90	80
544	1	Ex	N	.....	Up,Sp	2	(8)	AF	(l)	RS	RS	SF	Hy	4.10	(9)	N	41-40	(9)	N	Sh	Sh	2½	HG	90	90	80
Hudson 1D, 2D, 3D	1	Ex	N	.....	Sp	2	.....	AF	F	RS	RS	SF	Hy	(k)	(l)	(j)	(k)	(l)	(j)	Sh	Sh	2½	MH	90	90	90
4D, 5D, 7D	2	Ex	AF	P	Sp	3	.....	AF	F	RS	RS	SF	Hy	4.09	4.55	3.07	.....	50-11	.....	Sh	Sh	3½	MH	90	90	90
Kaiser K542, K545	1	Ex	N	.....	Sp	2	Cr	AF	F	RS	RS	SF	Hy	3.91	4.55	3.31	47-12	50-11	43-13	Sh	Sh	2½	HG	90	90	80
Lincoln	1	Ex	N	.....	Sp	2	(m)	Ne	F	RS	RS	SF	Hy	N	N	3.31	N	N	43-13	Sh	Sh	4	EH	90	90	80
Mercury	1	Ex	N	.....	Mec	2	(f)	Ne	F	RS	RS	SF	Hy	(n)	(o)	(j)	(n)	(o)	(j)	Sh	CS	3½	HE	90	90	80
Nash 541, 542	1	Ex	N	.....	Sp	2	Cr	Ne	F	RS	RS	TF	Hy	4.63	N	N	.....	N	N	Sh	Sh	2	EH	90	90	80
5410	(p)	Ex	(q)	P	(r)	(s)	Cr	AF	P	RS	RS	SF	Hy	(t)	(u)	3.30	(t)	(u)	43-13	Sh	Sh	3	HG	90	80	.....
5440	1	TT	AF	P	Mec,Sag	1	Cr	AF	P	TT	TT	SF	Hy	(u)	(v)	3.60	(u)	(v)	43-12	Sh	Sh	3	HG	90	80	.....
5460	1	TT	AF	P	Mec,Sag	1	Cr	AF	P	TT	TT	SF	Hy	4.10	(u)	3.15	41-10	(u)	41-13	Sh	Sh	4	HG	90	80	.....
Oldsmobile 88	1	Ex	N	.....	Sag	2	Cr	Ne	P	RS	RS	SF	Hy	(w)	N	3.07	(w)	N	40-13	Sh	Nu	5	MH	90	90	80
Super 88, 98	1	Ex	N	.....	Sag	2	Cr	Ne	P	RS	RS	SF	Hy	(w)	N	3.23	(w)	N	42-13	Sh	Nu	5	MH	90	90	80
Packard 5400, 5402	1	Ex	N	.....	(x)	2	(z)	AF	(1)	RS	RS	SF	Hy	3.90	4.10	3.54	39-10	41-10	39-11	N	CN	4¼	HG	90	90	80
5401, 5411	1	Ex	N	.....	(x)	2	(z)	AF	(1)	RS	RS	SF	Hy	3.90	4.10	3.23	39-10	41-10	42-13	N	CN	4¼	HG	90	90	80
5406	1	Ex	N	.....	(x)	2	(z)	AF	(1)	RS	RS	SF	Hy	N	N	3.54	N	N	39-11	N	CN	4¼	HG	90	90	80
5426	2	Ex	AF	F	(y)	3	CY	AF	(2)	RS	RS	SF	Hy	4.10	4.55	3.90	41-10	41-9	39-10	N	CN	4¼	HG	90	90	80
5431	1	Ex	N	.....	(x)	2	(z)	AF	(1)	RS	RS	SF	Hy	(3)	(4)	3.54	(3)	(4)	39-11	N	CN	4¼	HG	90	90	80
Plymouth P25	1	Ex	N	.....	NA	2	BT	AF	P	RS	RS	SF	Hy	3.73	4.10	3.73	41-11	41-10	41-11	SS	Sh	3¼	EH	90	90	80
Pontiac 5425	1	Ex	N	.....	Sag,Mec	2	Cr	AF	P	RS	RS	SF	Hy	(5)	N	3.08	(5)	N	40-13	Sh	CS	3¼	EH	90	90	90
5427	1	Ex	N	.....	Sag,Mec	2	Cr	AF	P	RS	RS	SF	Hy	(6)	N	3.08	(6)	N	40-13	Sh	CS	3¼	EH	90	90	90
5428	1	Ex	N	.....	Sag,Mec	2	Cr	AF	P	RS	RS	SF	Hy	(6)	N	3.23	(6)	N	42-13	Sh	CS	3¼	EH	90	90	90
Studebaker 15G	2	Ex	AF	P	Sp	3	Cr	Ne	F	RS	RS	SF	Hy	4.10	(7)	4.10	41-10	(7)	41-10	Sh	Sh	2½	HG	90	90	90
5H	2	Ex	AF	P	Sp	3	Cr	Ne	F	RS	RS	SF	Hy	4.09	4.27	3.54	.....	.....	39-11	Sh	Sh	3	HG	90	90	90
5HY	2	Ex	AF	P	Sp	3	Cr	Ne	F	RS	RS	SF	Hy	4.09	4.09	3.54	.....	.....	39-11	Sh	Sh	3	HG	90	90	90
Willys 6-226	1	Ex	N	.....	Sp	2	Cr	AF	F	RS	RS	SF	Hy	3.54	4.10	3.31	46-13	41-10	43-13	Sh	Sh	2½	EH	90	90	90
685B	1	Ex	N	.....	UP	2	BT	AF	P	RS	RS	SF	Hy	4.10	4.56	N	41-10	41-9	N	Sh	Sh	2½	HG	90	90	90

ABBREVIATIONS

(a)—3.07 std.; 3.36 opt.; 3.36 std. on air-conditioned models.
(b)—Front, ball and trunnion; rear, cross.
(d)—Powerflite, 3.73 (41-11); Gyromatic, 3.90 (39-10).
(f)—Front, cross slip joint; rear, split joint.
(g)—3.90 (39-10) std.; 4.10 (41-10) opt.
(h)—4.10 (41-10) std.; 3.90 (39-10) and 3.31 (43-13) opt.
(i)—3.31 (43-13) std.; 3.54 (39-11) opt.
(j)—3.54 (39-11) std.; 3.31 (43-13) opt.
(k)—4.10 (41-10) std.; 4.27 and 3.31 (43-13) opt.
(l)—4.27 std.; 4.10 (41-10), 3.54 (39-11) and 3.31 (43-13) opt.
(m)—Front, cross slip joint; rear, flanged U bolt.
(n)—3.91 (47-12) std.; 4.09 opt.
(o)—4.09 std.; 3.91 (47-12) opt.
(p)—One on 100" W.B. models; two on 108" W.B. models, but only one when equipped with Hydramatic.
(q)—None on 100" W.B. models; anti-friction on 108" W.B. models, but none when equipped with Hydramatic.
(r)—Mechanics on 100" W.B. models; Spicer on 108" W.B. models.
(s)—Two on 100" W.B. models; three on 108" W.B. models, but two when equipped with Hydramatic.
(t)—3.77 (34-9) std.; 4.40 (35-8) opt.
(u)—4.40 (35-8) std.; 4.10 (37-9) opt.
(v)—4.90 (39-8) std.; 4.40 (35-8) opt.
(w)—3.42 (41-12) std.; 3.64 (40-11) opt.
(x)—Spicer with std. trans. and overdrive; Universal Products with Ultramatic.
(y)—Front, Mechanics; rear, Spicer.
(z)—Cross and yoke with std. trans. and overdrive; front, ball and trunnion, rear, cross and yoke with Ultramatic.
(1)—Spicer, fitting; Universal Products, prepack.
(2)—Front, prepack; rear, fitting.
(3)—Convertible and Pacific, 3.90 (39-10); Caribbean, none.
(4)—Convertible and Pacific, 4.10 (41-10); Caribbean, none.
(5)—4.10 (41-10) std.; 3.90 (39-10) and 4.30 (43-10) opt.
(6)—3.90 (39-10) std.; 3.64 (40-11) and 4.10 (41-10) opt.
(7)—4.56 for Regal and Deluxe 2 & 4 dr. sedans, coupe and hardtop; 4.27 for Custom 2 & 4 dr. sedans; 4.88 for station wagons.
(8)—Universal Products ball and trunnion; Spicer, cross.
(9)—4.55 (41-19), 4.27 (47-11) opt.
AF—Anti-friction.
AT—Lubricated automatically by transmission lubricant.
BT—Ball and trunnion.
Bu—Bushing.
Chev—Chevrolet Div.
CN—Collapsible spacer and nut.
Cr—Cross. CS—Collapsible spacer.
CT—Cross and trunnion.
CY—Cross and yoke.
EH—Extreme pressure hypoid gear lubricant.
Ex—Exposed.
F—Grease fitting.
HE—Hypoid or "Multi-Purpose" extreme pressure gear lubricant.
HG—Hypoid gear lubricant.
HM—Hypoid or "Multi-Purpose" gear lubricant.
Hy—Hypoid.
Mec—Mechanics Universal Joint Div.
MH—"Multi-Purpose" hypoid gear lubricant.
N—No or none. NA—Not available.
Ne—Needle bearings. Nu—Nut.
P—Prepacked. Pl—Plain.
RS—Rear springs.
Sag—Saginaw Steering Gear Div.
SF—Semi-floating. Sh—Shims.
Sp—Spicer Mfg. Div.
SS—Solid shim. TT—Torque tube.
TF—Three quarter floating.
UP—Universal Products Co.
YT—Yoke and trunnion.

TIRES—BRAKES—BRAKE CYLINDERS

PASSENGER CAR MAKE AND MODEL	TIRES		SERVICE BRAKES																			PARKING BRAKES		
							Drum			Brake Lining								Wheel Cylinder Bore							
								Diameter			Primary				Secondary										
	Rev./Mile at 30 mph	Size	Type	Booster Type	Effective Area (sq. in.)	Percent Effectiveness—Rear	Type and Material	Front	Rear	Bonded or Riveted	Material	Size (length-width-thickness) Front Wheel	Size (length-width-thickness) Rear Wheel	Segments per Shoe	Material	Size (length-width-thickness) Front Wheel	Size (length-width-thickness) Rear Wheel	Segments per Shoe	Front	Rear	Master Cylinder Bore	Available Pedal Travel	Line Pressure at 100 lb. Pedal Load	Shoe Clearance Adjustment	Type of Control	Location of Control	Operates on
Buick 40	725.3	7.60/15	H	.....	184.6	47	CI	12	12	R	MA	10 3/32 x 2 1/4 x 3/16	10 3/32 x 1 3/4 x 3/16	1	MA	12 21/32 x 2 1/4 x 3/16	12 21/32 x 1 3/4 x 3/16	1	1 1/8	1	1	7 1/2	600	.015	SO	LC	RS
50	730.2	7.60/15	H	.....	207.5	47	CI	12	12	R	MA	10 3/32 x 2 1/4 x 3/16	10 3/32 x 2 1/4 x 3/16	1	MA	12 21/32 x 2 1/4 x 3/16	12 21/32 x 2 1/4 x 3/16	1	1 1/8	1	1	7 1/2	600	.015	SO	LC	RS
60	724.7	7.60/15	H	.....	207.5	47	CI	12	12	R	MA	10 3/32 x 2 1/4 x 3/16	10 3/32 x 2 1/4 x 3/16	1	MA	12 21/32 x 2 1/4 x 3/16	12 21/32 x 2 1/4 x 3/16	1	1 1/8	1	1	7 1/2	600	.015	SO	LC	RS
70	717.3	8.00/15	H	.....	219.0	47	CI	12	12	R	MA	10 3/32 x 2 1/2 x 1/4	10 3/32 x 2 1/4 x 3/16	1	MA	12 21/32 x 2 1/2 x 1/4	12 21/32 x 2 1/4 x 3/16	1	1 1/8	1	1	7 1/2	600	.015	SO	LC	RS
Cadillac 60, 62	(a)	8.00/15	H	Vac	211.6	44	CI	12	12	R	MA	11 5/32 x 2 1/2 x 1/4	11 5/32 x 2 1/2 x 1/4	1	MA	12 15/64 x 2 1/2 x 1/4	12 15/64 x 2 1/2 x 1/4	1	1 1/8	1	1	5 21/32	575	.009	TH	LS	RS
75	(b)	8.20/15	H	Vac	211.6	44	CI	12	12	R	MA	11 5/32 x 2 1/2 x 1/4	11 5/32 x 2 1/2 x 1/4	1	MA	12 15/64 x 2 1/2 x 1/4	12 15/64 x 2 1/2 x 1/4	1	1 1/8	1	1	5 21/32	575	.009	TH	LS	RS
Chevrolet 1500, 2100, 2400	748.0	6.70/15†	H	Vac	158.0	44	Com	11	11	B	MA	9 5/16 x 2 x 7/32	9 5/16 x 1 3/4 x 7/32	1	MA	11 11/16 x 2 x 7/32	11 11/16 x 1 3/4 x 7/32	1	1 1/8	1	7/8	6 1/2	800	(d)	TH	RC	RS
2900	748.0	6.70/15	H	N	158.0	47	Com	11	11	B	MA	9 5/16 x 2 x 7/32	9 5/16 x 1 3/4 x 7/32	1	MA	11 11/16 x 2 x 7/32	11 11/16 x 1 3/4 x 7/32	1	1 1/8	1	1	4 1/2	700	(d)	TH	LS	RS
Chrysler C62	722.0	7.60/15	H	Vac	201.0	40	Cen	12	12	B	MA	12 37/64 x 2 x 13/64	12 37/64 x 2 x 13/64	1	MA	12 37/64 x 2 x 13/64	12 37/64 x 2 x 13/64	1	1 1/8	1 1/8	1	7	918	.006	TH	LS	RT
C63	707.0	8.00/15	H	Vac	201.0	40	Cen	12	12	B	MA	12 37/64 x 2 x 13/64	12 37/64 x 2 x 13/64	1	MA	12 37/64 x 2 x 13/64	12 37/64 x 2 x 13/64	1	1 1/8	1 1/8	1 1/8	7	1400	.006	TH	LS	RT
C64	699.0	8.20/15	H	Vac	201.0	40	Cen	12	12	B	MA	12 37/64 x 2 x 13/64	12 37/64 x 2 x 13/64	1	MA	12 37/64 x 2 x 13/64	12 37/64 x 2 x 13/64	1	1 1/8	1 1/8	1 1/8	7	1400	.006	TH	LS	RT
C66	673.0	8.90/15	H	N	210.0	40	(e)	(f)	(f)	B	MA	.....	.....	12*	MA	.....	.....	12*	.....	1 1/4	1	7	918	SA	TH	LS	RT
De Soto S19, S20	722.0	7.60/15	H	.....	201.0	40	CI	12	12	B	MA	12 37/64 x 2 x 13/64	12 37/64 x 2 x 13/64	1	MA	12 37/64 x 2 x 13/64	12 37/64 x 2 x 13/64	1	1 1/8	1 1/8	1	7	918	.006	TH	LS	RT
Dodge D50, D53	733.0	6.70/15	H	N	173.5	40	CI	11	11	B	MA	11 1/2 x 2 x 13/64	11 1/2 x 2 x 13/64	1	MA	11 1/2 x 2 x 13/64	8 13/16 x 2 x 13/64	1	1 1/8	1 1/8	1 1/8	7	817	.006	TH	LS	RT
D51-1, D52	748.0	6.70/15	H	N	158.0	40	CI	10	10	B	MA	10 1/2 x 2 x 13/64	10 1/2 x 2 x 13/64	1	MA	10 1/2 x 2 x 13/64	8 x 2 x 13/64	1	1 1/8	1 1/8	1 1/8	7	817	.006	TH	LS	RT
D51-2	733.0	7.10/15	H	N	173.5	40	CI	11	11	B	MA	11 1/2 x 2 x 13/64	11 1/2 x 2 x 13/64	1	MA	11 1/2 x 2 x 13/64	8 13/16 x 2 x 13/64	1	1 1/8	1 1/8	1 1/8	7	817	.006	TH	LS	RT
Ford	753.0	6.70/15	H	N	173.5	38	Com	10	10	R	MA	10 33/64 x 2 1/4 x 3/16	10 33/64 x 1 3/4 x 3/16	1	MA	10 33/64 x 2 1/4 x 15/64	10 33/64 x 1 3/4 x 3/16	1	1 1/8	3/8	1	6 1/2	700	.010	TH	LS	RS
Henry J 543, 544	790.0	5.90/15	H	N	132.0	40	SM	9	9	R	MA	9 7/8 x 2 x 3/16	9 7/8 x 2 x 3/16	1	MA	7 5/8 x 1 3/4 x 3/16	7 5/8 x 1 3/4 x 3/16	1	1	13/16	1	7	650	.010	.....	D	RS
Hudson 1D	.....	5.90/15	H	N	132.1	66	Cen	9	9	R	.....	9 13/16 x 2 x 3/16	9 13/16 x 2 x 3/16	1	.....	7 21/32 x 1 3/4 x 3/16	7 21/32 x 1 3/4 x 3/16	1	1 1/8	13/16	1	7	620	.010	.....	LS	RS
2D, 3D	.....	6.40/15	H	N	132.1	66	Cen	9	9	R	.....	9 13/16 x 2 x 3/16	9 13/16 x 2 x 3/16	1	.....	7 21/32 x 1 3/4 x 3/16	7 21/32 x 1 3/4 x 3/16	1	1 1/8	13/16	1	7	620	.010	.....	LS	RS
4D	726.0	7.10/15▲	H	N	140.4	41	Cen	11	11	R	.....	9 1/4 x 1 3/4 x 3/16	9 1/4 x 1 3/4 x 3/16	1	.....	11 7/8 x 1 3/4 x 3/16	11 7/8 x 1 3/4 x 3/16	1	1 1/8	13/16	1	4 1/2	620	.010	.....	LS	RS
5D, 7D	726.0	7.10/15▲	H	N	158.7	41	Cen	11	11	R	.....	9 5/8 x 2 1/4 x 3/16	9 1/2 x 1 3/4 x 3/16	1	.....	11 25/64 x 2 1/4 x 3/16	11 7/8 x 1 3/4 x 3/16	1	1 1/8	13/16	1	4 1/2	620	.010	.....	LS	RS
Kaiser K542, K545	740.0	6.70/15	H	N	176.0	45	SM	11	11	R	MA	12 1/4 x 2 x 3/16	12 1/4 x 2 x 3/16	1	.....	10 x 2 x 3/16	10 x 2 x 3/16	1	(g)	1	1	7 13/16	600	.010	.....	D	RS
Lincoln	712.0	8.00/15●	H	.....	220.1	41	Com	12	12	R	MA	11 23/32 x 2 1/2 x 7/32	11 23/32 x 2 x 7/32	1	MA	12 15/64 x 2 1/2 x 7/32	12 15/64 x 2 x 7/32	1	1 1/8	13/16	1	6 1/2	650	.010	TH	LS	RS
Mercury	736.0	7.10/15	H	.....	159.1	41	Com	11	11	R	MA	9 9/32 x 2 x 3/16	9 9/32 x 1 3/4 x 3/16	1	MA	11 15/64 x 2 x 3/16	11 15/64 x 1 3/4 x 3/16	1	1 1/8	13/16	1	6 1/2	713	.010	TH	LS	RS
Nash 541, 542	905.0	5.20/13	H	N	75.8	50	CAI	8	8	B	MA	7 11/16 x 1 1/4 x 3/16	7 11/16 x 1 1/4 x 3/16	1	MA	7 11/16 x 1 1/4 x 3/16	7 11/16 x 1 1/4 x 3/16	1	3/4	3/4	3/4	4 3/4	780	F	HL	LI	RS
5410 100" W.B.	(h)	6.40/15	H	N	(i)	(j)	CI	(k)	8	R	MA	(l)	8 23/32 x 1 3/4 x 7/32●	1	MA	(m)	8 23/32 x 1 x 3/32	1	1	13/16	1	6 1/2	940	F	.....	.....	RS
5410 108" W.B.	765.0	6.40/15	H	N	104.3	36	CI	9	8	R	MA	9 7/32 x 2 x 7/32	8 23/32 x 1 1/4 x 3/32	1	MA	7 11/16 x 1 3/4 x 7/32	8 23/32 x 1 x 3/32	1	1	13/16	1	6 1/2	940	F	.....	.....	RS
5440	742.0	6.70/15	H	Vac	150.0	45	CI	9	9	R	MA	9 7/32 x 2 1/4 x 7/32	9 7/32 x 2 x 7/32	1	MA	7 11/16 x 2 x 7/32	7 11/16 x 1 3/4 x 7/32	1	1 1/16	7/8	1	6	1010	.015	.....	.....	RS
5460	726.0	7.10/15	H	Vac	172.0	47	CI	10	10	R	MA	8 15/16 x 2 x 7/32	8 15/16 x 2 x 7/32	1	MA	11 5/32 x 2 1/2 x 7/32	11 7/16 x 2 x 7/32	1	1 1/16	15/16	1 1/8	6	535	.015	.....	.....	RS
Oldsmobile 88, Super 88, 98	721.9	7.60/15	H	.....	191.7	44	Cen	11	11	R	.....	9 3/8 x 2 1/2 x 7/32	9 3/8 x 2 x 7/32	1	.....	12 1/32 x 2 1/2 x 7/32	12 1/32 x 2 x 7/32	1	1 3/32	31/32	1	6 1/2	735	.015	TH	LS	RS
Packard 5400, 5401, 5411	731.0	7.60/15	H	.....	191.8	40	Cen	11	11	R	.....	9 5/16 x 2 1/2 x 3/16	9 5/16 x 2 x 3/16	1	.....	12 x 2 1/2 x 3/16	12 x 2 x 3/16	1	1 1/8	1 1/16	1	6 3/4	710	.010	TH	LS	RS
5402, 5406, 5431	717.0	8.00/15	H	.....	208.3	40	Cen	12	12	R	.....	11 1/32 x 2 1/4 x 3/16	11 1/32 x 2 x 3/16	1	.....	13 x 2 1/4 x 3/16	13 x 2 x 3/16	1	1 1/8	1	1	6 3/4	710	.010	TH	LS	RS
5426	709.0	8.20/15	H	.....	208.3	40	Cen	12	12	R	.....	11 1/32 x 2 1/4 x 3/16	11 1/32 x 2 x 3/16	1	.....	13 x 2 1/4 x 3/16	13 x 2 x 3/16	1	1 1/8	1	1	6 3/4	710	.010	TH	LS	RS
Plymouth P25	748.0	6.70/15	H	Vac	158.0	40	Cen	10	10	B	MA	10 1/2 x 2 x 13/64	10 1/2 x 2 x 13/64	1	MA	10 1/2 x 2 x 13/64	8 x 2 x 13/64	1	1 1/8	1 1/8	1 1/8	7	817	.006	TH	LS	RT
Pontiac 5425, 5427, 5428	736.0	7.10/15	H	.....	171.0	41	Cen	11	11	R	MA	9 5/8 x 2 1/4 x 15/64	9 5/8 x 1 3/4 x 15/64	1	MA	12 1/32 x 2 1/4 x 15/64	12 1/32 x 1 3/4 x 15/64	1	1 1/16	7/8	1	6 1/8	497	.015	TH	LS	RS
Studebaker 15G	(n)	6.40/15■	H	.....	166.0	38	Com	10	9	R	MA	10 23/32 x 2 x 3/16	9 27/32 x 2 x 3/16	1	MA	10 23/32 x 2 x 3/16	9 27/32 x 2 x 3/16	1	1	13/16	1	6	890	.007	.....	RC	RS
5H, 5HY	739.0	7.10/15	H	.....	195.3	38	Com	11	10	R	MA	12 x 2 1/4 x 7/16	10 25/32 x 2 x 7/16	1	MA	12 x 2 1/4 x 7/16	10 25/32 x 2 x 7/16	1	1 1/16	7/8	1	6	890	.007	.....	RC	RS
Willys 6-226, 685B	762.0	6.40/15	H	N	132.8	35	CI	9	9	R	MA	9 7/16 x 2 x 7/32	9 7/16 x 2 x 7/32	1	MA	7 11/16 x 1 3/4 x 7/32	7 11/16 x 1 3/4 x 7/32	1	1 1/8	13/16	1	7	650	.005	LH	LS	RS

ABBREVIATIONS

*—Per wheel.
†—7.10/15 on convertible coupes equipped with Powerglide.
▲—7.60/15 on convertible coupes.
●—8.20/15 on convertible coupes and air conditioned cars.
■—6.70/15 on station wagon.

(a)—Firestone, 711.0; U. S. Royal, 716.0; Goodrich, 714.3.
(b)—Firestone, 706.0; U. S. Royal, 703.0; Goodrich, 700.0.
(d)—Adjust to light drag and back off seven notches.
(e)—Disc brake, two aluminum pressure plates.
(f)—9 1/4" x 12".
(g)—Rear shoe, one; front shoe, 1 1/8.
(h)—Custom, 765.0; Super, 790.0.
(i)—92.1 with std. trans.; 104.3 with Hydramatic.
(j)—40 with std. trans.; 36 with Hydramatic.
(k)—8 with std. trans.; 9 with Hydramatic.
(l)—8 23/32 x 1 3/4 x 7/32 with std. trans.; 9 7/16 x 2 x 7/32 with Hydramatic.
(m)—8 23/32 x 1 1/2 x 7/32 with std. trans.; 7 11/16 x 1 3/4 x 7/32 with Hydramatic.
(n)—All models except stat. wag., 771.0; stat. wag., 753.0.
B—Bonded. Cen—Centrifuse.
CAI—Chrome alloy cast iron.
CI—Cast iron.
Com—Composite; rim, cast alloy iron, web, pressed steel.
D—On dash board.
F—Floating. H—Hydraulic.
HL—Hand lever.
LC—Left side cowl panel.
LH—"L" handle.
LI—Left side, under instrument panel.
LS—Left of steering column.
MA—Moulded asbestos.
N—No or none. R—Riveted.
RC—Right of steering column.
RS—Rear service shoes.
RT—Rear of transmission.
SA—Self adjusting.
SM—Steel and malleable iron.
SO—Step on, left foot operated.
TH—"T" handle. Vac—Vacuum.

FRONT SUSPENSION AND STEERING

FRONT SUSPENSION AND STEERING

PASSENGER CAR MAKE AND MODEL	FRONT SUSPENSION										STEERING																	
		Spring						Shock Absorbers					Turning Diameter			Mechanical					Power						Linkage			
																Gear													
																		Ratios (to–1)						Ratios (to–1)					
	Type	Type	Free Length	I. D. of Coil	Spring Rate (lb. per in.)	Rate at Wheel (lb. per in.)	Normal Load (lb. @ rated length)	Make	Type	Piston Diam. (in.)	Stabilizer—Type	Type	Wheel Diameter	Wall to Wall (outside front)	Curb to Curb (outside front)	Inside Wheel Angle with Outside Wheel at 20 (deg.)	Type	Make	Gear	Overall	Type	Make	Type	Gear	Overall	Pump Driven by	Type	Location	Drag Link	Tie Rods
Buick																														
40, 60	ICS	Co	15	4 3/64	350	92	1085–9½	Del	D	1	Li	Mec*	18	44′7″L	42′11″L	22½	BW	Sag	23.6	26.7	H	Sag	BW	21.3	24.1	VB	PDL	R	Tr	2
50	ICS	Co	15	4 3/64	360	95	1140–9½	Del	D	1	Li	Mec*	18	45′6″	43′0″	22½	BW	Sag	23.6	26.7	H	Sag	BW	21.3	24.1	VB	PDL	R	Tr	2
70	ICS	Co	15	4 3/64	360	95	1175–9½	Del	D	1	Li	Pow	18	45′6″	43′0″	22½	N				H	Sag	BW	21.3	24.1	VB	PDL	R	Tr	2
Cadillac																														
60	ICS	Co	(c)	4	350		2210–10 1/16	Del	D	1	Li	Pow	18	48′7″	46′2″	22 2/3	N				H	Sag	NS	19.2	21.5	Cr	PDL	R	Tr	2
62	ICS	Co	(d)	4	350		2165–10 1/16	Del	D	1	Li	Pow	18	47′2″	45′1″	22	N				H	Sag	NS	19.2	21.5	Cr	PDL	R	Tr	2
75	ICS	Co	16 7/8	4	400		2445–10 1/16	Del	D	1	Li	Pow	18	54′1″	51′6″	22 3/4	N				H	Sag	NS	19.2	21.5	Cr	PDL	R	Tr	2
Chevrolet																														
1500, 2100, 2400	ICS	Co	(e)	3 13/64	300	110	(f)	Del	D	1	Li	Mec*	18	41′0″L	38′0″L	24	WS	Sag	19.4	23.1	H	Sag	RB	21.3	22.1	En	CP	R	Lg	2
2900	ICS	Co	13 23/64	3 11/64	300	110	1145–9 5/8	Del	D	1	Li	Mec	17¼	39′0″L	38′11″L		WS	Sag	16.0	16.0	N						CP	R	Lg	2
Chrysler																														
C62	ICS	Co		4	480	NA	2095L	Chr	D	1	Li	Mec*	18	NA	41′9″		WR	Gem	20.4	25.8	H	Gem	WR	16.2	16.2	Ge	DDT	R	Lg	2
C63	ICS	Co		4	550	NA	2525L	Chr	D	1	Li	Mec*	18	NA	43′6″		WR	Gem	20.4	25.8	H	Gem	WR	16.2	16.2	Ge	DDT	R	Lg	2
C64	ICS	Co		4	480	NA	2380L	Chr	D	1	Li	Mec*	18	NA	NA		WR	Gem	20.4	25.8	H	Gem	WR	16.2	16.2	Ge	DDT	R	Lg	2
C66	ICS	Co		4	600	NA	2805L	Chr	D	1	Li	Pow	18	NA	NA		N				H	Gem	WR	16.2	16.2	Ge	DDT	R	Lg	2
De Soto																														
S19	ICS	Co		4	550	NA	2315–11L	Chr	D	1	Li	Mec*	18	44′6″	41′9″	NA	WR	Gem	20.4	25.8	H	Gem	WR	16.2	16.2	Ge	CET	R	Lg	2
S20	ICS	Co		4	480	NA	2095–11L	Chr	D	1	Li	Mec*	18	44′6″	41′9″	NA	WR	Gem	20.4	25.8	H	Gem	WR	16.2	16.2	Ge	CET	R	Lg	2
Dodge																														
D50	ICS	Co		4	445	NA	2170–11L	Chr	D	1	Li	Mec*	18	44′2″	41′5″		WR	Gem	18.2	22.2	H	Ros	WR	18.2	20.4	Ge	IET	R	Tr	2
D51, D52 (4 door)	ICS	Co		4	415	NA	1925–11L	Chr	D	1	Li	Mec*	18	44′2″	41′5″		WR	Gem	18.2	21.1	H	Mon	WR	18.2	20.4	Ge	DLS	R	N	2
D52 (2 door)	ICS	Co		4	385	NA	1800–8¾L	Chr	D	1	Li	Mec*	18	42′3″	39′7″		WR	Gem	18.2	21.1	H	Mon	WR	18.2	20.4	Ge	DLS	R	N	2
D53-1, 2 (2 door), 3	ICS	Co		4	445	NA	2085–11L	Chr	D	1	Li	Mec*	18	42′3″	39′7″		WR	Gem	18.2	22.2	H	Ros	WR	18.2	20.4	Ge	IET	R	Tr	2
D53-2 (4 door)	ICS	Co		4	445	NA	2170–11L	Chr	D	1	Li	Mec*	18	42′3″	39′7″		WR	Gem	18.2	22.2	H	Ros	WR	18.2	20.4	Ge	IET	R	Tr	2
Ford																														
6	ICS	Co	15 3/32	4 3/32	360	105	1925–9 23/32	MGH	D	(u)	Li	Mec*	18	NA	41′1″	24½	WR	Fo	20.1	25.3	H	Ben	WR	20.1	25.3	VB	Par	R	Tr	2
8	ICS	Co	15¼	4 3/32	360	105	2000–9 23/32	MGH	D	(u)	Li	Mec*	18	NA	41′1″	24½	WR	Fo	20.1	25.3	H	Ben	WR	20.1	25.3	VB	Par	R	Tr	2
Henry J																														
543, 544	ICS	Co		3½	290	97	1370–8¼	Mon	D	⅞	Fr	Mec	17	38′0″	35′0″		WR	Gem	18.2	24.0	N						UA	R	N	2
Hudson																														
1D	ICS	Co		3½	376	83	1790–9 13/16	Mon	D	⅞	Li	Mec	18	41′8″L	39′4″L		WR	Gem	18.2	20.2	N						CP	R	Lg	2
2D, 3D	ICS	Co		3½	376	83	1790–9 13/16	Mon	D	⅞	Li	Mec	18	41′6½″L	39′4½″L		WR	Gem	18.2	20.2	N						CP	R	Lg	2
4D	ICS	Co		4 3/64	386	107	2086–9 5/16	Mon	D	⅞	Li	Mec*	18	42′11″L	40′6″L		WR	Gem	18.2	20.2	H	Mon	WR	18.2	20.2	VB	CP	R	Lg	2
5D	ICS	Co		4 3/64	386	107	2086–9 5/16	Mon	D	1	Li	Mec*	18	42′11″L	40′6″L		WR	Gem	18.2	20.2	H	Mon	WR	18.2	20.2	VB	CP	R	Lg	2
7D	ICS	Co		4 3/64	386	107	2086–9 5/16	Mon	D	1	Li	Mec*	18	43′9″L	40′7″L		WR	Gem	20.4	25.6	H	Sag	WR	20.4	25.6	VB	CP	R	Lg	2
Kaiser																														
K542, K545	ICS	Co		3¾	287	88	1923–9¼	Mon	D	⅜	Li	Mec*	18	41′6″	38′0″		WR	Gem	18.2	25.0	H	Mon	WR	18.2	15.0	VB	Lin	R	Tr	2
Lincoln																														
	ICS	Co	15 5/8	4¼	400	119	2450–9¼	MG	D	(4)	Li	Mec*	18	48′4″	45′9″	23⅓	WR	Gem	20.4	26.1	H	Sag	RN	19.8	21.3	VB	Par	R	Tr	2
Mercury																														
	ICS	Co	15 21/64	4 3/32	375	110	2150–9½	MGH	D	(u)	Li	Mec*	18	NA	40′11″	24⅙	WR	Fo	20.1	25.4	H	Ben	WR	20.1	25.4	VB	Par	R	Tr	2
Nash																														
541, 542	ICS	Co		3 7/32	100	96	546–	Gir	D	1	N	Mec	17	39′11″L	37′9″L	22½	CL	CG	13.5	21.0	N						BS	R	Tr	2
5410 100″ w.b.	ICS	Co		3½	110	NA	755–10	DM	D	1	N	Mec	17	44′4″	(7)	21½	WR	Gem	20.0	19.5	N						BS	F	Tr	2
5410 108″ w.b.	ICS	Co		3½	110	NA	810–8 3/8	DM	D	1	N	Mec	17	43′10″	42′2″	21½	WR	Gem	20.0	19.5	N						BS	F	Tr	2
5440	ICS	Co		5½	100	NA	920–8 5/8	DM	D	1	N	Mec*	18	48′4″	44′6″	24½	WR	Gem	20.0	24.0	H	Mon	WR	18.2	24.0	VB	BS	R	Tr	2
5460	ICS	Co		5½	115	NA	1000–8 5/8	DM	D	1	N	Mec*	18	48′0″	45′10″	23½	WR	Gem	20.0	25.5	H	Ben	WR	18.2	25.5	VB	BS	R	Tr	2
Oldsmobile																														
88	ICS	Co		3 11/16	325	100	1950–	Del	Le	1½	Li	Mec*	18	44′8″	42′6″	23	BN	Sag	21.3	27.5	H	Sag	BN	21.3	25.7	VB	Sym	R	Tr	2
Super 88	ICS	Co		4 3/64	325	100	2000–	Del	Le	1½	Li	Mec*	18	44′8″	42′6″	23	BN	Sag	21.3	27.5	H	Sag	BN	21.3	25.7	VB	Sym	R	Tr	2
98	ICS	Co		4 3/64	325	100	2050–	Del	Le	1½	Li	Mec*	18	45′7″	43′0″	23	BN	Sag	21.3	27.5	H	Sag	BN	21.3	25.7	VB	Sym	R	Tr	2
Packard																														
5400, 5401, 5411	ICS	Co		4¼	300	90	1950–10 1/16	DM	D	1	Li	Mec*	18	(10)	(12)	23¾	WR	Gem	20.0	27.3	H	Ben	WR	18.2	22.0	VB	SI	R	Tr	2
5402	ICS	Co		4¼	300	90	2120–10 1/16	DM	D	1	Li	Mec*	18	(11)	(13)	23¾	WR	Gem	22.3	30.9	H	Ben	WR	18.6	22.5	VB	SI	R	Tr	2
5406	ICS	Co		4¼	300	90	2280–10 1/16	DM	D	1	Li	Mec*	18	(11)	(13)	23¾	WR	Gem	23.3	30.9	H	Ben	WR	18.6	22.5	VB	SI	R	Tr	2
5426	ICS	Co		4¼	402	120	2650–10 1/16	DM	D	1	Li	Mec*	18	NA	NA	23¾	WR	Gem	22.3	30.9	H	Ben	WR	18.6	22.5	VB	SI	R	Tr	2
5431	ICS	Co		4¼	300	90	(8)	DM	D	1	Li	(9)	18	(10)	(12)	23¾	WR	Gem	22.3	30.9	H	Ben	WR	18.6	22.5	VB	SI	R	Tr	2
Plymouth																														
P25	ICS	Co		4	385	NA	1800–8¾L	Chr	D	1	Li	Mec*	17½	40′2″	39′0″		WR	Gem	18.2	21.1	H	Mon	WR	18.2	19.7	Ge	DDT	R	N	2
Pontiac																														
5425	ICS	Co		3 11/16	290	95	1985–10	Del	D	1	Li	Mec*	18	43′6″L	41′2″L	22L	WR	Sag	19.0	25.0	H	Sag	BN	19.1	23.3	VB	Par	R	N	2
5427, 5428	ICS	Co		3 11/16	290	95	2060–10	Del	D	1	Li	Mec*	18	45′0″L	42′8″L	22L	WR	Sag	19.0	25.0	H	Sag	BN	19.1	23.3	VB	Par	R	N	2
Studebaker																														
15G	ICS	Co		4 1/16	280	117	1440–8 5/16	HM	D	1	Li	Mec*	18	(31)	(32)	23	(33)	RS	(34)	(36)	H	Sag	RB	21.3	20.0	VB	CET	R	Lg	2
5H, 5HY	ICS	Co		4 1/16	325	136	1565–9¼	HM	D	1	Li	Mec*	18	(31)	(32)	23	(33)	RS	(35)	(37)	H	Sag	RB	21.3	20.0	VB	CET	R	Lg	2
Willys																														
6-226	ICS	Co	18½	3½	110	110	975–10 5/16	Mon	D	1	N	Mec*	18	43′1″L	40′3″		CL	Ros	17.6	21.0	H	Mon	WR	20.0	22.5	VB	TL	R	Tr	2
685B	ICS	Co	18½	3½	110	110	810–	Mon	D	1	N	Mec*	18	43′1″L	40′3″L		CL	Ros	17.6	21.0	H	Mon	WR	20.0	22.5	VB	TL	R	Tr	2

(e)—Disc brake, two aluminum pressure plates.
(k)—8 with std. trans.; 9 with Hydra-matic.
B—Bonded. Cen—Centrifuse.
CAI—Chrome alloy cast iron.
CI—Cast iron.
LH—"L" handle.
LI—Left side, under instrument panel.
LS—Left of steering column.
SM—Steel and malleable iron.
SO—Step on, left foot operated.
TH—"T" handle. Vac—Vacuum.

ABBREVIATIONS

*—Power steering optional.
(c)—6019 sedan, 6267 convertible and 6267S Eldorado, 16⅜.
(d)—6219 sedan, 6237 coupe and 6237D Coupe De Ville, 16⅜.
(e)—All models with std. trans. except convertibe, 14¾; convertible and all models with Powerglide, 15⅛.
(f)—All models with std. trans. except convertible, 1555–9½; convertible and all models with Powerglide, 1640–9½.
(u)—Monroe and Houde, 1″; Gabriel, 1⅛″.
(4)—Monroe, 1⅜″; Gabriel, 1⅝″.
(7)—Custom, 42′ 9″; Super, 42′ 6″.
(8)—Pacific, 2040–10 1/16; convertible, 2120–10 1/16; Carribbean, 2200–10 1/16.
(9)—Pacific and convertible, mechanical std. and power opt.; Carribbean, power std.
(10)—Mechanical steering, 46′ 0″; power steering, 44′ 0″.
(11)—Mechanical steering, 48′ 0″; power steering, 46′ 0″.
(12)—Mechanical steering, 43′ 0″; power steering, 41′ 0″.
(13)—Mechanical steering, 45′ 0″; power steering, 43′ 0″.
(31)—All except coupe models, right, 41′ 6″; left, 42′ 6″; coupe models right, 43′ 0″; left, 44′ 0″.
(32)—All except coupe models, right, 38′ 6″; left, 39′ 6″; coupe models, right, 40′ 0″; left, 41′ 0″.
(33)—Ross, cam and lever; Saginaw, worm and roller.
(34)—Ross, 13.5; Saginaw, 19.0.
(35)—Ross, 16.5; Saginaw, 19.0.
(36)—Ross, 19.5; Saginaw, 20.0.
(37)—Ross, 24.0; Saginaw, 20.0.
Ben—Bendix. BN—Ball nut.
BS—Ball and socket.
BW—Ball bearing, worm and nut.
CET—Center, equal length tie rods.
CG—Cam Gears Ltd.
Chr—Chrysler Corp. CP—Center point.
CL—Cam and lever. Cr—Crankshaft.
Co—Coil. D—Direct acting.
DDT—Direct double tie rod.
Del—Delco Products Div.
DLS—Direct, long and short tie rods.
DM—Delco or Monroe. En—Engine.
F—Front. Fo—Ford Motor Co.
Ge—Generator. Fr—Frameless.
Gem—Gemmer Mfg. Co. H—Hydraulic.
Gir—Girling. HM—Houde or Monroe.
ICS—Independent with coil springs.
IET—Idler arm, equal length tie rods.
L—Left turn.
Le—Lever. Lin—Linkage.
Lg—Longitudinal. LI—Linkless.
LI—Link. Mec—Mechanical.
MG—Monroe or Gabriel.
MGH—Monroe, Gabriel or Houde.
Mon—Monroe Auto Equipment Co.
N—No or none. NA—Not available.
NS—Ball, nut and sector.
Par—Parallelogram.
PDL—Parallel drag link.
Pow—Power steering.
R—Rear of wheels.
RB—Recirculating ball.
RN—Recirculating ball nut.
Ros—Ross. RS—Ross or Saginaw.
Sag—Saginaw Steering Gear Div.
SI—Side idler. Tr—Transverse.
Sym—Symmetrical. UA—Unequal arm.
TL—Three Link.
VB—"V" belt. WR—Worm and roller.
WS—Worm and sector.

WHEEL ALIGNMENT—REAR SUSPENSION

PASSENGER CAR MAKE AND MODEL	ALIGNMENT: Kingpin: Inclination at Camber (deg.)	Kingpin: Diameter	Kingpin: Bearings: Upper	Kingpin: Bearings: Lower	Kingpin: Bearings: Thrust	Wheel Alignment: Caster (deg.)	Wheel Alignment: Camber (deg.)	Wheel Alignment: Toe In (Outside tread—in.)	Steering Knuckle Type	Wheel Spindle: Diameter: Inner Bearing	Wheel Spindle: Diameter: Outer Bearing	Wheel Spindle: Thread Size	Wheel Spindle: Bearing Type	REAR SUSPENSION: Type	Spring: Type	Spring: Material	Spring: Length	Spring: Width	Spring: No. Leaves or Coil I. D.	Spring: Spring Rate (lb. per in.)	Spring: Rate at Wheel (lb. per in.)	Spring: Normal Load (lb. @ rated length)	Shock Absorbers: Make	Shock Absorbers: Type	Shock Absorbers: Piston Diameter
Buick 40, 60	0 @ 7/8	.8615	Bu	Bu	Ba	3/4N to 1 1/2P	5/8N to 7/8P	0–1/16	RE	1.3738	.8429	13/16–16	Ba	CS	Co	9260	19 3/8	3/8	5 1/2	100	100	960–9 1/16	Del	Le•	1 1/2
Cadillac 50, 70	0 @ 7/8	.8516	Bu	Bu	Ba	3/4N to 1 1/2P	5/8N to 7/8P	0–1/16	RE	1.3738	.8429	13/16–16	Ba	CS	Co	9260	19 1/2	3/4	5 1/2	115	115	1070–9 1/16	Del	Le	1 1/2
Cadillac 60, 62	5 5/6 @ 0	1.0000	Bu	Bu	Ba	0 to 1N	3/8N to 3/8P	3/16–1/4	RE	2.9630	2.2500	3/4–20	Ba	LL	SE	(a)	56 1/2	2 1/2	5	(b)	.....	(c)	Del	D	1
Cadillac 75	5 5/6 @ 0	1.0000	Bu	Bu	Ba	0 to 1N	3/8N to 3/8P	3/16–1/4	RE	2.9630	2.2500	3/4–20	Ba	LL	SE	(a)	56 1/2	2 1/2	6	140	.....	1440–56 1/2	Del	D	1
Chevrolet 1500, 2100, 2400	3 1/2–4 1/2	.8663	Bu	Bu	Ba	0 to 1P	0 to 1P	1/16–1/16	RE	1.2804	.7493	3/4–20	Ba	LL	SE	CAS	49	1 3/4	7	100*	.....	1100–49	Del	D	1
Chevrolet 2900	3 1/2–4 1/2	.8663	Bu	Bu	Ba	0 to 1P	0 to 1P	0–1/8	RE	1.2813	.7501	3/4–20	Ba	LL	SE	CAS	51	2	4	115	115	750–51	Del	D	1
Chrysler C62	5–6 1/2 @ 0	.7953	Ro	Bu	Ba	1N to 3N	3/8N to 3/8P†	0–1/8	RE	1.2500	.7500	3/4–16	TR	LL	SE	AS▲	53 5/8	2 1/2	5	95	.....	(d)	Chr	D	1
Chrysler C63	5–6 1/2 @ 0	.7953	Ro	Bu	Ba	1N to 3N	3/8N to 3/8P†	0–1/16	RE	1.2500	.7500	3/4–16	TR	LL	SE	AS▲	53 5/8	2 1/2	6	100	.....	(e)	Chr	D	1
Chrysler C64	5–6 1/2 @ 0	.7953	Ro	Bu	Ba	1N to 3N	3/8N to 3/8P†	0–1/16	RE	1.2500	.7500	3/4–16	TR	LL	SE	AS▲	53 5/8	2 1/2	6	100	.....	(f)	Chr	D	1
Chrysler C66	6 1/8–8 @ 0	.9363	Ro	Bu	Ba	1N to 3N	3/8N to 3/8P†	0–1/16	E	1.3750	.8750	3/4–16	TR	LL	SE	AS▲	53 5/8	2 1/2	7	140	.....	(g)	Chr	D	1
De Soto S19, S20	5 1/2 @ 0	.7953	Ro	Bu	Ba	1N to 3N	3/8N to 3/8P†	0–1/16	RE	1.2500	.7500	3/4–16	TR	LL	SE	AS▲	53 5/8	2 1/2	5	95	.....	(h)	Chr	D	1
Dodge D50	5 1/2 @ 0	.7953	Ro	Bu	Ba	1N to 1P	3/8N to 3/8P†	0–1/16	RE	1.2500	.7500	3/4–16	TR	LL	SE	St	53 5/8	2	6	95	.....	.....	Chr	D	1
Dodge D51	5 1/2 @ 0	.7953	Ro	Bu	Ba	1N to 1P	3/8N to 3/8P†	0–1/16	RE	1.2500	.7500	3/4–16	TR	LL	SE	St	53 5/8	2	5	95	.....	(i)	Chr	D	1
Dodge D52	5 1/2 @ 0	.7953	Ro	Bu	Ba	1N to 1P	3/8N to 3/8P†	0–1/16	RE	1.2500	.7500	3/4–16	TR	LL	SE	St	53 5/8	2	7	120	.....	(j)	Chr	D	1
Dodge D53	5 1/2 @ 0	.7953	Ro	Bu	Ba	1N to 1P	3/8N to 3/8P†	0–1/16	RE	1.2500	.7500	3/4–16	TR	LL	SE	St	53 5/8	2	6	90	.....	(j)	Chr	D	1
Ford	7 1/9 @ 1/6–1 1/6	None	BJ	BJ	.....	0 to 1P•	0 to 1P♦	1/16–1/8	BJ	1.2496	.7496	3/4–16	TR	LL	SE	(k)	53	2	5	110	115	810–53	MGH	D	(l)
Henry J 543, 544	4–4 3/4 @ 0	.7953	Bu	Bu	Ba	1N to 1P	1/4P to 1P	3/16–1/4	RE	1.2500	.7500	3/4–16	TR	LL	SE	(10)	49	1 3/4	5	87	NA	575–49	Mon	D	7/8
Hudson 1D, 2D, 3D	4 @ 3/4	.....	Bu	Bu	Ba	1/2P to 1 1/2P	1/4P to 1 1/4P	0–1/16	RE	1.2500	.7500	1 1/16–18	TR	LL	SE	(m)	52	1 3/4	6	100	100	700–52	Mon	D	7/8
Hudson 4D	3 1/2	.....	Bu	Bu	Ba	1/2P to 1 1/2P	1/2P to 1 1/2P	0–1/16	RE	1.2500	.7500	1 1/16–18	TR	LL	SE	(m)	54	1 3/4	8	120	120	950–54	Mon	D	7/8
Hudson 5D, 7D	3 1/2	.....	Bu	Bu	Ba	1/2P to 1 1/2P	1/2P to 1 1/2P	0–1/16	RE	1.2500	.7500	1 1/16–18	TR	LL	SE	(m)	54	1 3/4	8	120	120	950–54	Mon	D	1
Kaiser K542, K545	4 3/4–5 1/2 @ 0	.7950	Bu	Bu	Ba	1N to 1P	0 to 3/4P	1/16–1/8	RE	1.2500	.7500	3/4–16	TR	LL	SE	(n)	51	2	6	95	112	868–51	Mon	D	1/8
Lincoln	7 1/6 @ 3/4	None	BJ	BJ	Ba	0 to 1 1/6N•	0 to 3/4P♦	3/32–3/32	BJ	1.3118	.8118	3/4–16	TR	LL	SE	(k)	54 3/4	2	8	105	110	980–54 3/4	MG	D	(o)
Mercury	7 @ 3/4	None	BJ	BJ	Ba	0 to 1 1/6N•	0 to 3/4P♦	3/32–3/32	BJ	1.2496	.7486	3/4–16	TR	LL	SE	(k)	53	2	8	95	110	860–53	MGH	D	(l)
Nash 541, 542	6 1/2	.6870	Bu	Bu	Pl	2P to 3P	1/2P to 1 1/2P	0–1/16	E	.9840	.6690	5/8–...	Ba	LL	SE	5150	43	1 1/2	.....	75	75	422–43	Gir	D	1
Nash 5410	8	ISN	Th	Th	Th	3/4P to 1 1/4P	1/2P to 3/4P	1/8–1/4	PK	1.2500	.7500	3/4–16	TR	LL	SE	5150	(r)	1 3/4	(s)	(t)	NA	(u)	DM	D	1
Nash 5440, 5460	6 1/2	ISN	Ro	Th	Ba	(p)	1/4N to 3/4P	1/16–1/8	PK	1.2500	.7500	3/4–16	TR	CS	Co	(q)	.....	.....	4 1/2	125	NA	870–10 3/16	DM	D	1
Oldsmobile 88, Super 88	5 5/6 @ 0	.8618	Bu	Bu	Ba	0 to 3/4N	1/4N to 3/4P	1/16–1/8	RE	1.3739	.7493	3/4–20	BC	LL	SE	(v)	58	2 1/2	5	95	115	960–59 27/32	Del	D	1
Oldsmobile 98	5 5/6 @ 0	.8618	Bu	Bu	Ba	0 to 3/4N	1/4N to 3/4P	1/16–1/8	RE	1.3739	.7493	3/4–20	BC	LL	SE	(v)	58	2 1/2	5	100	120	975–59 27/32	Del	D	1
Packard 5400, 5401, 5411	5 5/6 @ 0	.8663	Ne	Bu	Ba	1/2N to 1 1/2N	1/4N to 3/4P	0–1/16	RE	1.2500	.7500	3/4–16	TR	LL	SE	SMS	54 3/8	2 1/2	5	95	95	950–54 3/8	DM	D	1
Packard 5402, 5406	5 5/6 @ 0	.8663	Ne	Bu	Ba	1/2N to 1 1/2N	1/4N to 3/4P	0–1/16	RE	1.3120	.8120	3/4–16	TR	LL	SE	SMS	54 3/8	2 1/2	5	110	110	1040–54 3/8	DM	D	1
Packard 5426	5 5/6 @ 0	.8663	Ne	Bu	Ba	1/2N to 1 1/2N	1/4N to 3/4P	0–1/16	RE	1.3120	.8120	3/4–16	TR	LL	SE	SMS	54 3/8	2 1/2	5	155	155	1320–54 3/8	DM	D	1
Packard 5431	5 5/6 @ 0	.8663	Ne	(w)	Ba	1/2N to 1 1/2N	1/4N to 3/4P	0–1/16	RE	1.3120	.8120	3/4–16	TR	LL	SE	SMS	54 3/8	2 1/2	5	110	110	(x)	DM	D	1
Plymouth P25	5 1/2 @ 0	.7053	Bu	Bu	Ba	1N to 1P	3/8N to 3/8P†	0–1/16	RE	1.2500	.7500	3/4–16	TR	LL	SE	AS▲	53 5/8	2	5	95	NA	(y)	Chr	D	1
Pontiac 5425, 5427	NS	.8615	Bu	Bu	Ba	1/2N to 1/2P	0 to 1P	0–1/16	RE	1.2800	.7500	3/4–20	Ba	LL	SE	(z)	58	2	5	100	100	(1)	Del	D	1
Pontiac 5428	NS	.8615	Bu	Bu	Ba	1/2N to 1/2P	0 to 1P	0–1/16	RE	1.2800	.7500	3/4–20	Ba	LL	SE	(z)	60	2	6	120	120	(2)	Del	D	1
Studebaker 15G	6 @ 0	(3)	Bu	Ne	BTR	1N to 2 1/2N‡	0 to 1P■	1/16–1/8	RE	1.2500	.7500	3/4–16	TR	LL	SE	5150	50	2 1/2	(4)	(5)	(7)	(9)	HM	D	1
Studebaker 5H, 5HY	6 @ 0	(3)	Bu	Ne	BTR	1N to 2 1/2N‡	0 to 1P■	1/16–1/8	RE	1.2500	.7500	3/4–16	TR	LL	SE	5150	50	2 1/2	(4)	(6)	(8)	(9)	HM	D	1
Willys 6-226	8 1/4	ISN	Th	Th	Th	1/2P to 1 1/2P	3/4P to 1 1/4P	3/32–5/32	RE	1.2496	.7496	5/8–18	Ro	LL	SE	4068	48	2	7	100	.....	710–48	Mon	D	1
Willys 685B	8 1/4	ISN	Th	Th	Th	1/2P to 1 1/2P	3/4P to 1 1/4P	3/32–3/32	RE	1.2496	.7496	5/8–18	Ro	LL	SE	4068	48	2	7	100	100	710–48	Mon	D	1

ABBREVIATIONS

•—All models except stat. wag.
†—Left side to be 1/4° to 1/2° greater than right side within these limits.
▲—Temporary substitution, chromium carbon steel.
•—Not to vary more than 1/2° from one side to the other.
♦—Not to vary more than 1/4° from one side to the other.
‡—Not to vary more than 3/4° from one side to the other.
■—Left side to be 1/2° greater than right side.

(a)—9260 or 5155.
(b)—6019 and 6237D, 115; 6219 and 6237, 110; 6267 and 62678, 120.
(c)—6019 and 6237D, 1190–56 1/2; 6219 and 6237, 1160–56 1/2; 6267 and 62678, 1230–56 1/2.
(d)—Right, 840–53 3/8; left, 880–53 3/8.
(e)—Right, 880–53 3/8; left, 920–53 3/8.
(f)—Right, 960–53 3/8; left, 1000–53 3/8.
(g)—Right, 1400–53 3/8; left, 1450–53 3/8.
(h)—Right, 800–53 3/8; left, 840–53 3/8.
(i)—Right, 680–54; left, 720–54.
(j)—2 dr. sed., 800–54; 4 dr. sed., 840–54.
(k)—5147 or 5160.
(l)—Monroe and Houde, 1"; Gabriel, 1 1/8".
(m)—Silicon manganese or Amola steel.
(n)—4068, 5152, 5160 or 9260 opt.
(o)—Monroe, 1 3/4; Gabriel, 1 5/8.
(p)—0 to 1/2P with mech. steering; 1/2P to 1P with pow. steering.
(q)—9160 or 5160.
(r)—45 with 100" W.B.; 48 with 108" W.B.
(s)—6 std.; 9 opt. on 100" W.B.; 6 on 108" W.B.
(t)—100 std.; 145 opt.
(u)—650–45 std., 760–45 opt. on 100" W.B.; 670–48 std., 760–48 opt. on 108" W.B.
(v)—5155 or 5160.
(w)—Pacific and convertible, bushing; Caribbean, needle bearing.
(x)—Pacific, 900–54 3/8; Caribbean, 1090–54 3/8; Pacific, 1040–54 3/8.
(y)—Right, 640–54; left, 680–54.
(z)—5160, 5155 or 9255.
(1)—Right, 800–58; left, 850–58.
(2)—Right, 850–60; left, 900–60.
(3)—Tapered kingpin; upper diameter, 1.2500; lower diameter, 1.1250.
(4)—All models except stat. wag., 4; stat. wag., 6.
(5)—All coupe and sedan models, 110; stat. wag., 143.
(6)—All coupe and sedan models, 90; stat. wag., 143.
(7)—All coupe and sedan models, 115; stat. wag., 151.
(8)—All coupe and sedan models, 100; stat. wag., 151.
(9)—All coupe and sedan models, 700–50; stat. wag., 825–50.
(10)—4068 std.; 5160 opt.

AS—Amola steel.
Ba—Ball bearing.
BC—Ball and cone.
BJ—Ball joint.
BTR—Ball or tapered roller bearing.
Bu—Bushing.
CAS—Chrome alloy steel.
Chr—Chrysler Corp.
Co—Coil.
CS—Coil springs.
D—Direct acting.
Del—Delco Products Div.
DM—Delco or Monroe.
E—Elliot. **Gir**—Girling.
HM—Houde or Monroe.
ISN—Integral with steering knuckle.
Le—Lever.
LL—Longitudinal leaf springs.
MG—Monroe or Gabriel.
MGH—Monroe, Gabriel or Houde.
Mon—Monroe Auto Equipment Co.
N—Negative.
NA—Not available.
Ne—Needle bearing.
NS—Not specified. **P**—Positive.
PK—Part of kingpin.
Pl—Plain bearing.
RE—Reverse Elliot.
Ro—Roller bearing.
SE—Semi-elliptic leaf.
SMS—Silico manganese steel.
St—Steel. **Th**—Threaded bushing.
TR—Tapered roller bearing.

SMALL ENGINES

MAKE AND MODEL	Designed for Use	Number of Cycles	ENGINE Type	No. of Cylinders	Bore and Stroke (In.)	Total Displacement (Cu. In.)	Compression Ratio (to — 1)	Valve Location	Horsepower Rated at RPM	Horsepower Continuous at RPM	Torque—Lb. Ft. at RPM	Weight (Lb.)	GOVERNOR Used	GOVERNOR Type	Ignition System Type	FUEL SYSTEM Type	FUEL SYSTEM Make	Fuel Used	Starting Method
AIR COOLED																			
Briggs & Stratton........5S	General Purpose	4	Ver	1	2x1½	4.71	5.29	L	1.00-3200	.85-3200	1.60-3200	30	Y	Av	Mag	MV	Own	G	Rr
........6S	General Purpose	4	Ver	1	2x2	6.28	5.86	L	1.60-3200	1.40-3200	2.60-3200	33	Y	Av	Mag	MV	Own	G	Rr
........6B-H	Lawn Mowers	4	Hor	1	2 1/16x1½	6.30	5.90	L	2.00-3600	1.70-3600	2.92-3600	19¼	Y	Av	Mag	MV	Own	G	Rr
........6	General Purpose	4	Ver	1	2x2	6.28	5.86	L	2.00-3600	1.70-3600	2.90-3600	33	Y	MA	Mag	Car	Own	G	Rr
........6B-HS	Lawn Mowers	4	Hor	1	2 1/16x1½	6.30	5.90	L	1.60-3200	1.36-3200	2.62-3200	18½	Y	Av	Mag	Car	Own	G	Rr
........8	General Purpose	4	Ver	1	2¼x2	7.95	5.40	L	2.50-3600	2.10-3600	3.70-3600	36	Y	MA	Mag	Car	Own	G	Rr
........9	General Purpose	4	Ver	1	2¼x2¼	8.95	5.40	L	3.30-3600	2.80-3600	4.90-3600	61	Y	Me	Mag	Car	Own	G	HR
........14	General Purpose	4	Ver	1	2⅝x2⅝	14.21	5.40	L	5.20-3600	4.40-3600	7.70-3600	76	Y	Me	Mag	Car	Own	G	HR
........23	General Purpose	4	Ver	1	3x3¼	22.97	5.40	L	8.40-3600	7.10-3600	12.30-3600	98	Y	Me	Mag	Car	Own	G	HR
Clinton........350	General Purpose	4	Ver	1	2x1½	4.71	5.20	L	1.10-3600	1.00-3200	1.50-3600	27	Y	Av	Mag	MV	Own	G	Rr
........A300	General Purpose	4	Ver	1	2x1½	4.71	5.20	L	1.30-3600	1.20-3200	1.90-3600	29	Y	Av	Mag	Car	Cart	G	Rr
........VS300	General Purpose	4	Hor	1	2x1½	4.71	5.20	L	1.30-3600	1.20-3200	1.90-3600	35	Y	Av	Mag	Car	Cart	G	Rr
........B700	General Purpose	4	Ver	1	2x1⅞	5.89	5.60	L	2.00-3600	1.80-3200	2.90-3600	36	Y	Me	Mag	Car	Cart	G	Rr
........VS700	General Purpose	4	Hor	1	2x1⅞	5.89	5.60	L	2.00-3600	....	2.90-3600	36	Y	Av	Mag	Car	Cart	G	Rr
........800	General Purpose	4	Ver	1	2⅜x1⅞	8.30	6.20	....	2.50-3600	....	3.60-3600	42	Y	Av	Mag	Car	Cart	G	Rr
........VS800	General Purpose	4	Hor	1	2⅜x1⅞	8.30	6.20	....	2.50-3600	....	3.60-3600	45	Y	Av	Mag	Car	Cart	G	Rr
........D1100	General Purpose	4	Ver	1	2⅜x1⅞	8.30	6.20	L	3.00-3600	2.90-3200	4.40-3600	45	Y	Me	Mag	Car	Cart	G	Rr
........200	General Purpose	2	Hor	1	1⅞x1⅝	4.50	.....	L	1.60-3600	....	.....-3600	18	Y	Av	Mag	Car	Cart	G	Rr
........VS200	General Purpose	2	Ver	1	1⅞x1⅝	4.50	.....	L	1.60-3600	....	....	15¾	Y	Av	Mag	Car	Cart	G	Rr
........VS400	General Purpose	4	Hor	1	2⅛x1⅝	5.76	.....	....	2.50-3600	....	....	15¾	Y	Av	Mag	Car	Cart	G	Rr
........1600	General Purpose	4	Hor	1	2 11/16x2⅝	16.30	6.50	L	6.00-3200	....	....	76	Y	Fb	Mag	Car	Cart	G	Rr
........2500	General Purpose	4	Hor	1	3⅛x3¼	25.00	6.50	L	9.00-3200	....	....	104	Y	Fb	Mag	Car	Cart	G	Rr
Continental........AU7	General Purpose	4	(c)	1	2⅛x2	7.10	5.70	L	2.00-3600	1.70-3600	3.02-3000	36	Y	MA	Mag	Car	ZT	G	BR
........AU7B	General Purpose	4	(c)	1	2⅛x2	7.10	6.00	L	2.25-3600	1.91-3600	3.50-3000	36	Y	MA	Mag	Car	ZT	G	BR
........AU7R	General Purpose†	4	(c)	1	2⅛x2	7.10	5.70	L	2.00-3600	1.70-3600	3.02-3000	41	Y	MA	Mag	Car	ZT	G	BR
........AU8	General Purpose	4	(c)	1	2¼x2	7.95	5.80	L	2.50-3600	2.12-3600	4.10-2600	36	Y	MA	Mag	Car	ZT	G	BR
........AU8B	General Purpose	4	(c)	1	2¼x2	7.95	5.80	L	2.50-3600	2.12-3600	4.10-2600	36	Y	MA	Mag	Car	ZT	G	BR
........AU8R	General Purpose†	4	(c)	1	2¼x2	7.95	5.80	L	2.50-3600	2.12-3600	4.10-2600	36	Y	MA	Mag	Car	ZT	G	BR
........AU85	General Purpose	4	(c)	1	2 3/16x2	8.40	6.00	L	3.00-3600	2.75-3600	4.50-2600	36	Y	MA	Mag	Car	ZT	G	BR
........AU85R	General Purpose†	4	(c)	1	2 3/16x2	8.40	6.00	L	3.00-3600	2.75-3600	4.50-2600	41	Y	MA	Mag	Car	ZT	G	BR
........AD7	Lawn Mowers	4	(d)	1	2⅛x2	7.10	5.70	L	2.00-3600	1.70-3600	3.02-3000	41	Y	Av	Mag	Car	ZT	G	BR
........AD8	Lawn Mowers	4	(d)	1	2¼x2	7.95	5.80	L	2.50-3600	2.12-3600	4.10-2600	41	Y	Av	Mag	Car	ZT	G	BR
........AD85	Lawn Mowers	4	(d)	1	2 3/16x2	8.40	6.00	L	3.00-3600	2.75-3600	4.50-2600	41	Y	Av	Mag	Car	ZT	G	BR
........AW7	Lawn Mowers	4	(d)	1	2⅛x2	7.10	5.70	L	2.00-3600	1.70-3600	3.02-3000	41	Y	Av	Mag	Car	ZT	G	BR
........AW8	Lawn Mowers	4	(d)	1	2¼x2	7.95	5.80	L	2.50-3600	2.12-3600	4.10-2600	41	Y	Av	Mag	Car	ZT	G	BR
........AW85	Lawn Mowers	4	(d)	1	2 3/16x2	8.40	6.00	L	3.00-3600	2.75-3600	4.50-2600	41	Y	Av	Mag	Car	ZT	G	BR
........AU7	General Purpose	4	Hor	1	2⅛x2	7.10	5.70	L	2.00-3600	1.70-3600	3.02-3000	36	Y	MA	Mag	Car	ZT	G	BP
........AU8	General Purpose	4	Hor	1	2¼x2	7.95	5.80	L	2.50-3600	2.12-3600	4.10-2600	36	Y	MA	Mag	Car	ZT	G	BP
........AU85	GS,Ac,Pu,Af	4	(c)	1	2 3/16x2	8.40	6.00	L	3.00-3600	2.75-3600	4.50-2600	36	Y	MA	Mag	Car	Til	G	BP
Cushman........Husky-M6	General Purpose	4	Ver	1	2⅜x2¾	12.30	4.70	L	3.00-3000	2.60-3000	5.20-2000	65	Y	Fb	Mag	Car	Til	G	R
........Husky-M7	General Purpose	4	Ver	1	2⅝x2¾	14.90	5.40	L	4.50-3000	3.80-3000	7.90-2000	65	Y	Fb	Mag	Car	Til	G	R
........Husky-M8	General Purpose	4	Ver	1	2⅞x2¾	17.80	5.90	L	5.00-3000	4.30-3000	9.50-2000	65	Y	Fb	Mag	Car	Til	G	R
Gladden........40	General Purpose	4	Ver	1	2½x3	14.70	4.50	L	4.30-3200	4.30-3200	8.40-2200	79	Y	Fb	Mag	Car	MS	G,K	Rr
........40M	Marine	4	Ver	1	2½x3	14.70	4.50	L	4.30-3200	4.30-3200	8.40-2200	80	Y	Fb	Mag	Car	MS	G	Rr
........50	General Purpose	4	Ver	1	2½x3	14.70	5.70	L	5.25-3200	5.25-3200	9.20-2500	81	Y	Fb	Mag	Car	MS	G	Rr
........75	General Purpose	4	Ver	1	2⅞x3	19.40	5.70	L	7.00-3200	7.00-3200	13.50-2200	83	Y	Fb	Mag	Car	MS	G,K	Rr
........75ES	General Purpose	4	Ver	1	2⅞x3	19.40	5.70	L	6.50-3200	6.50-3200	11.80-3200	136	N	.....	Bat	Car	MS	G	Ele
........75M	Marine	4	Ver	1	2⅞x3	19.40	5.70	L	7.00-3200	7.00-3200	11.80-3200	86	N	.....	Mag	Car	MS	G	Rr
........75MES	Marine	4	Ver	1	2⅞x3	19.40	5.70	L	6.50-3200	6.50-3200	11.00-3200	138	N	.....	Bat	Car	MS	G	Ele
........MC	Motorcycle	4	Ver	1	2⅞x3	19.40	7.00	L	9.00-4000	7.00-3000	12.30-3000	65	N	.....	Mag	Car	Am	G	Pe
Homelite........20	GS,Pu,Cs,Bl	2	Ver	1	2⅜x1½	6.70	5.50	(a)	3.50-3600	3.50-3600	....	20	Y	Va	Mag	Car	Til	G,K	Hc
........23	GS,Pu,Bl	2	Ver	1	2¼x2⅛	8.40	5.50	(a)	4.00-3600	4.00-3600	....	30	Y	Va	Mag	Car	Own	G,K	Hc
........24	General Purpose	2	Ver	1	2⅝x2¼	11.40	5.50	(a)	6.00-3600	6.00-3600	....	40	Y	Va	Mag	Car	OZ	G,K	Hc
........32	Generator Sets	2	Ver	1	3x3	21.21	5.50	(a)	10.00-3600	....	....	125	Y	Va	Mag	Car	Own	G,K	Hc
........26	Chain Saws	2	Ver	1	2⅜x1½	6.70	6.00	(a)	4.00-4800	4.00-4800	....	27	Y	Ce	Mag	Car	Til	G	Hc
........5-30	Chain Saws	2	Ver	1	2 1/16x1½	6.97	6.00	(a)	5.50-5200	5.50-5200	....	29	Y	Ce	Mag	Car	Til	G	Hc
Jacobsen........J100	Lawn Mowers	2	Hor	1	2x1½	4.70	5.50	....	1.63-3600	1.50-3600	1.40-3600	19½	Y	Av	Mag	Car	Til	G	Rc
........J200	Lawn Mowers	2	Hor	1	2x2	6.28	5.66	....	2.43-3600	2.20-3600	3.55-3600	46	Y	Av	Mag	Car	Til	G	Rc
Kohler........K90	General Purpose	4	Ver	1	2⅜x2	8.86	6.00	L	3.60-3600	3.10-3600	5.30-3600	41	Y	Fb	Mag	Car	Cart	G	Rr
........K160	General Purpose	4	Ver	1	2⅞x2½	16.22	6.00	L	6.60-3600	5.40-3600	9.50-3600	67	Y	Fb	Mag	Car	Cart	G	BP
........K660	General Purpose	4	Op	2	3⅝x3¼	67.20	6.00	L	26.80-3600	22.70-3600	39.00-3600	225	Y	Fw	Mag	Car	Cart	G	HE
Lauson........55AB, RSH	General Purpose	4	Ver	1	2x1⅞	5.90	5.80	L	2.00-3600	1.50-3600	2.90-3600	28	Y	Fb	Mag	Car	Til	G	R
........TLH	General Purpose	4	Ver	1	2¼x2¼	8.95	5.80	L	3.00-3200	2.50-3200	4.70-3200	52	Y	Fb	Mag	Car	Til	G	R
........PAH	General Purpose	4	Ver	1	2⅞x2¾	17.85	5.00	L	5.50-3000	4.50-3000	9.50-3000	85	Y	Fb	Mag	Car	Til	G	R
........TLV	Lawn Mowers	4	Hor	1	2¼x2¼	8.95	5.80	L	3.00-3200	2.50-3200	4.70-3200	58	Y	Fb	Mag	Car	Til	G	R
........RSV800, V1	Lawn Mowers	4	Hor	1	2x1⅞	5.90	5.80	L	2.00-3600	1.50-3600	2.90-3600	33	Y	Fb	Mag	Car	Til	G	R
........55S100	Lawn Mowers	4	Ver	1	2x1⅞	5.90	5.80	L	1.60-3200	1.35-3200	2.70-3200	33	Y	Fb	Mag	MV	Own	G	R
........55A	General Purpose	4	Ver	1	2x1⅞	5.90	5.80	L	2.00-3600	1.50-3600	2.90-3600	33	Y	Fb	Mag	Car	Til	G	R
........R2	Lm,Pu	4	Hor	1	2x1⅞	5.90	5.80	L	2.00-3600	1.50-3600	2.90-3600	34	Y	Fb	Mag	Car	Til	G	BP
........P	General Purpose	4	Ver	1	2⅞x2¾	17.85	6.30	L	6.30-3600	5.50-3600	9.50-3000	85	Y	Fb	Mag	Car	Til	G	BP
McCulloch........4-30	Chain Saws	2	Ver	1	2⅛x1½	5.30	7.00	(a)	4.00-5500	....	4.40-4000	30	Y	Os	Mag	Car	Own	G	AR
........33	Chain Saws	2	Ver	1	1¾x1⅜	3.30	7.00	Re	2.00-6500	....	1.75-5000	20	N	.....	Mag	Car	Own	G	AR
........47	Chain Saws	2	Ver	1	2x1½	4.71	6.40	(a)	3.00-4200	2.50-3600	4.60-3000	25	Y	Os	Mag	Car	Own	G	AR
........7-55	Cs,ED	2	Hor	1	2½x2	9.85	6.50	P	7.00-4500	....	8.80-3500	55	N	.....	Mag	Car	Own	G	AR
........99	Pu,Cs,ED	2	Hor	1	2½x2	9.82	6.25	(a)	8.00-5000	....	9.50-3500	23½	Y	Ce	Mag	Car	Own	G	AR
Onan........AH	GS,In	4	Ver	1	2½x2¼	11.05	6.23	L	3.30-3000	2.60-3000	6.00-3000	55	Y	(b)	BM	Car	Zen	G	ER
........Com-1B	Industrial	4	Ver	1	2¾x2¾	16.30	4.10	L	3.45-2100	2.70-2400	7.10-2400	124	Y	(b)	Mag	Car	Zen	NgG	ER

SMALL ENGINES

MAKE AND MODEL	Designed for Use	Number of Cycles	ENGINE: Type	No. of Cylinders	Bore and Stroke (In.)	Total Displacement (Cu. In.)	Compression Ratio (to — 1)	Valve Location	Horsepower: Rated at RPM	Horsepower: Continuous at RPM	Torque—Lb. Ft. at RPM	Weight (Lb.)	GOVERNOR: Used	GOVERNOR: Type	Ignition System Type	FUEL SYSTEM: Type	FUEL SYSTEM: Make	Fuel Used	Starting Method
AIR COOLED—Continued																			
Onan—Cont'd 1B	Generator Sets	4	Ver	1	2¾x2¾	16.30	4.80	....	2.50–1800	2.50–1800	7.30–1800	*177	Y	(b)	Mag	Car	Zen	NgG	Rr
BH	GS,In	4	Op	2	2¼x2¼	22.10	6.23	....	6.70–3000	5.30–3000	12.00–3000	85	Y	(b)	BM	Car	MS	G	ER
CK	General Purpose	4	Op	2	3x2¾	38.80	6.20	L	10.10–3000	8.60–3000	18.00–3000	95	Y	(b)	BM	Car	MS	NgG	ER
LK	GS,In	4	Ver	1	3x2¾	19.40	5.80	L	4.50–3000	4.00–3000	10.00–1800	....	Y	(b)	BM	Car	Zen	G	HE
ACK	Generator Sets	4	Op	2	3x2¾	38.80	6.25	L	13.80–3600	10.00–3600	20.00–3600	125	Y	Me	Mag	Car	.....	G	R
CW	Generator Sets	4	Op	2	4x3½	88.00	5.50	L	20.00–1800	16.50–1800	58.30–1800	420	Y	Fb	Mag	Car	Zen	G	HE
Power Products AH47	General Purpose	2	Hor	1	2x1½	.....	.....	Re	2.00–3300	.....	.....	14¾	Y	Fb	Mag	Car	Til	G	Rr
AV47	General Purpose	2	Hor	1	2x1½	.....	.....	Re	2.00–3300	.....	.....	13	Y	Fb	Mag	Car	Til	G	Rr
AH36	General Purpose	2	Hor	1	1¾x1⅝	3.60	.....	Re	1.25–3300	1.25–3300	2.00–3300	14¾	Y	Fb	Mag	Car	Til	G	Rr
AV36	General Purpose	2	Hor	1	1¾x1½	3.60	.....	Re	1.15–3300	1.15–3300	1.83–3300	12¾	Y	Fb	Mag	Car	Til	G	Rr
BH69	General Purpose	2	Hor	2	1¾x1⅛	6.90	.....	Re	1.15–3300	1.15–3300	1.88–3300	24¼	Y	Fb	Mag	Car	Til	G	Rr
BV69	General Purpose	2	Hor	2	1¾x1⅛	6.90	.....	Re	1.10–3300	1.10–3300	1.79–3300	21¼	Y	Fb	Mag	Car	Til	G	Rr
AV80	General Purpose	2	Hor	1	2¼x2	8.00	.....	Re	1.25–3300	1.25–3300	2.00–3300	23½	Y	Fb	Mag	Car	Til	G	Rr
BH60	General Purpose	2	Hor	2	1½x1⅛	6.00	.....	Re	2.00–3300	2.00–3300	3.13–3300	24¼	Y	Fb	Mag	Car	Til	G	Rr
BV60	General Purpose	2	Hor	2	1½x1⅛	6.00	.....	Re	1.80–3300	1.80–3300	2.93–3300	18¼	Y	Fb	Mag	Car	Til	G	Rr
Reo 211H	Lawn Mowers	4	(e)	1	2x1¾	5.50	5.22	L	1.75–4000	1.40–3400	2.32–2400	29	Y	Av	Mag	Car	Cart	G	Rc
MK-H	1B	4	Hor	1	2x1¾	5.50	5.22	L	1.75–4000	1.40–3400	2.32–2400	29	N	.....	Mag	Car	Cart	G	AR
660H	Lawn Mowers	4	(e)	1	2x1¾	5.50	5.22	L	1.75–4000	1.40–3400	2.32–2400	30	Y	Av	Mag	Car	Cart	G	Rc
2230-H	Lawn Mowers	4	Hor	1	2x1¾	5.50	5.22	L	1.75–4000	1.40–3400	2.32–2400	30	Y	Av	Mag	Car	Cart	G	AR
2340-H	Snow Plows	4	Hor	1	2x1¾	5.50	5.22	....	1.75–4000	1.40–3400	2.32–2400	30	Y	Av	Mag	Car	Cart	G	AR
2830-H, 2840-H	Lawn Mowers	4	Hor	1	2x1¾	5.50	5.22	....	1.75–4000	1.40–3400	2.32–2400	30	Y	Av	Mag	Car	Cart	G	AR
2980-H	Lawn Mowers	4	Hor	1	2x1¾	5.50	5.22	L	1.75–4000	1.40–3400	2.32–2400	28	Y	Av	Mag	Car	Cart	G	R
United 1½ H.P.	General Purpose	4	Ver	1	2⅝x2½	11.08	.....	L	.....	.....	.....	70	Y	.....	Mag	Car	Til	G	Pe
2 H.P.	General Purpose	4	Ver	1	2⅝x2½	13.53	.....	L	.....	.....	.....	70	Y	.....	Mag	Car	Til	G	Pe
4 H.P.	General Purpose	4	Ver	1	2⅝x2½	14.89	.....	L	.....	.....	.....	75	Y	.....	Mag	Car	Til	G	Pe
West Bend 2700	Lawn Mowers	2	Ver	1	1¾x1⅛	3.76	65 psi	Re	1.50–3600	1.50–3600	2.30–3600	18¼	Y	Av	Mag	Car	Til	G	R
2703	Lawn Mowers	2	Ver	1	1¾x1⅝	3.90	75 psi	Re	1.50–3600	1.50–3600	2.30–3600	15	Y	Av	Mag	Car	.....	G	Rr
2752	Sy,Cs	2	Hor	1	1¾x1⅛	3.76	65 psi	Re	1.50–3600	1.50–3600	2.30–3600	15	Y	Av	Mag	Car	Til	G	R
2722	Lawn Mowers	2	Ver	1	2x1⅝	5.10	80 psi	Re	2.30–3600	2.30–3600	3.60–3600	15	Y	Av	Mag	Car	Til	G	R
2774	Chain Saws	2	Hor	1	2x1⅝	5.10	80 psi	Re	2.80–4000	2.80–4000	3.50–4000	15	N	.....	Mag	Car	Til	G	Re
Wisconsin ABN	General Purpose	4	Ver	1	2⅛x2¾	13.50	5.65	L	4.60–3600	3.70–3600	7.50–2400	77	Y	Ce	Mag	Car	MS	G	R
AKN	General Purpose	4	Ver	1	2⅜x2¾	17.80	5.13	L	6.00–3600	4.80–3600	10.40–2400	77	Y	Ce	Mag	Car	MS	G	R
AEH	General Purpose	4	Ver	1	3x3¼	23.00	5.34	L	6.10–2600	4.90–2600	13.00–2000	130	Y	Ce	Mag	Car	Zen	G	R
AEN	General Purpose	4	Ver	1	3x3¼	23.00	5.34	L	7.50–3000	6.00–3000	15.40–2200	110	Y	Ce	Mag	Car	Zen	G	R
AFH	General Purpose	4	Ver	1	3¼x4	33.20	4.60	L	7.20–2200	5.75–2200	19.80–1400	180	Y	Ce	Mag	Car	Zen	G	Hc
AGH	General Purpose	4	Ver	1	3½x4	38.50	4.60	L	8.40–2200	6.70–2200	24.20–1400	180	Y	Ce	Mag	Car	Zen	G	Hc
AHH	General Purpose	4	Ver	1	3⅝x4	41.30	4.60	L	9.20–2200	7.40–2200	25.80–1300	180	Y	Ce	Mag	Car	Zen	G	Hc
TE	General Purpose	4	Ver	2	3x3¼	45.90	4.60	L	11.20–2600	9.00–2600	27.10–1600	220	Y	Ce	Mag	Car	Zen	G	Hc
TF	General Purpose	4	Ver	2	3¼x3¼	53.90	4.67	L	14.30–2600	11.40–2600	32.50–1700	220	Y	Ce	Mag	Car	Zen	G	Hc
VE4	General Purpose	4	Vee	4	3x3¼	91.90	4.60	L	22.00–2600	17.60–2600	50.00–1600	295	Y	Ce	Mag	Car	Zen	G	Hc
VF4	General Purpose	4	Vee	4	3¼x3¼	107.70	4.67	L	25.00–2400	20.00–2400	58.20–1600	295	Y	Ce	Mag	Car	Zen	G	Hc
VP4D	General Purpose	4	Vee	4	3½x4	154.00	4.64	L	31.00–2200	24.80–2200	88.00–1400	410	Y	Ce	Mag	Car	MS	G	Hc
VG4D	General Purpose	4	Vee	4	3½x4	154.00	5.00	L	38.00–2200	28.80–2200	93.00–1500	410	Y	Ce	Mag	Car	MS	G	Hc
WATER COOLED																			
Cushman Cub R-14	General Purpose	4	Hor	1	3¼x4½	37.33	4.50	L	3.00–850	3.00–850	18.40–600	195	Y	Fb	Mag	MV	Own	G,K,Ng	He
Cub R-20	General Purpose	4	Hor	1	3½x4½	43.29	4.10	L	3.70–850	3.70–850	22.50–700	235	Y	Fb	Mag	MV	Own	G,K,Ng	He
Cub R-30	General Purpose	4	Hor	1	3¾x4½	49.70	4.64	L	4.50–850	4.50–850	28.40–800	245	Y	Fb	Mag	MV	Own	G,K,Ng	He
Cub R-40	General Purpose	4	Hor	1	4x4½	56.50	5.10	L	5.40–850	5.40–850	35.00–800	255	Y	Fb	Mag	MV	Own	G,K,Ng	He
Kermath Sea Pup	Marine	4	Ver	1	2¾x2¾	18.00	6.00	L	5.00–3200	.....	10.00–2700	63	....	Ce	Mag	Car	Til	G	ER
Sea Twin	Marine	4	Ver	2	2¾x2½	30.00	6.20	L	10.00–3000	.....	19.00–2700	109	....	Ce	Mag	Car	Til	G	ER
Le Rol D140	General Purpose	4	Ver	4	3½x3⅝	140.00	5.85	I	33.00–2400	26.50–2200	94.00–1300	650	Y	Fb	BM	CM	ZE	G,D,Ng	HE
United 2R14	Af	4	Hor	1	3¼x4½	37.30	.....	L	.....	.....	.....	195	Y	(h)	Mag	Car	Til	G,K,D	He
3R20	Af	4	Hor	1	3½x4½	43.25	.....	L	.....	.....	.....	235	Y	(h)	Mag	Car	Til	G,K,D	He
4R30	Af	4	Hor	1	3¾x4½	49.75	.....	L	.....	.....	.....	245	Y	(h)	Mag	Car	Til	G,K,D	He
Universal AFTC	Generator Sets	4	Ver	2	3x3½	49.50	5.79	L	5.00–1200	6.00–1350	25.00–1200	385	Y	Me	BM	Car	Str	G	HE
AFC	GS,In	4	Ver	4	3x3½	99.00	5.79	L	19.00–1800	18.00–1800	53.00–1800	....	Y	Me	BM	Car	Str	G,Ng	HE

ABBREVIATIONS

†—Reduction gear.
•—Weight includes generator.
(a)—Rotary intake valve in crankcase.
(b)—Flyweights on camshaft.
(c)—Inclined 20° up from horizontal.
(d)—Vertical shaft engine.
(e)—Cylinder 45° from horizontal.
(h)—Automatic, controlled by flywheel.
Ac—Air compressors.
Af—Auxillary farm implement equipment.
Am—Amal.
AR—Automatic rewinding rope.
Av—Air vane.
Bat—Battery.
Bl—Blowers.
BM—Battery and magneto.
BP—Belt or pulley.
BR—Belt, pulley or recoil.
Car—Carburetor.
Cart—Carter Carburetor Corp.
Ce—Centrifugal.
CM—Carburetor or mixing valve.
Cs—Chain saws.
D—Distillate.
ED—Earth drill.
Ele—Electric.
ER—Electric or rope.
Fb—Flyball.
Fw—Flyweight.
G—Gasoline.
GS—Generator sets.
GT—Garden tractors.
HA—Home appliances.
Hc—Hand crank.
HE—Hand crank or electric.
Hor—Horizontal.
HR—Hand crank or rope.
I—Inhead.
IB—Inboard engine for boat.
In—Industrial.
K—Kerosene.
L—"L" head.
Lm—Lawn mowers.
MA—Mechanical or air vane.
Mag—Magneto.
MC—McCulloch.
Me—Mechanical.
MS—Marvel-Schebler Carburetor Div.
MV—Mixing valve.
N—No or none.
Ng—Natural gas.
NgG—Combination gas and gasoline.
Op—Opposed.
Os—Overspeed.
OZ—Own and Zenith.
P—Ports.
Pe—Pedal.
PSI—Pounds per square inch.
Pu—Pumps.
Pul—Pulley.
R—Rope.
Rc—Recoil.
Re—Reed valves.
RE—Refrigerating equipment.
Rr—Recoil or rope.
Str—Stromberg Carburetor Div.
Sy—Syths.
Til—Tillotsen Mfg. Co.
Va—Valve.
Vee—"V" type.
Ver—Vertical.
Y—Yes.
ZE—Zenith carburetor; Ensign mixing valve.
Zen—Zenith Carburetor Div.
ZT—Zenith or Tillotsen.

LIGHT TRUCKS

MAKE AND MODEL	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at Given R.P.M.	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive and Torque	Gear Ratio Range in High
Chevrolet																		
Sdn. Divy.....D54	115	....	4100	▼▲3275	6.70/15S	6.70/15S	O-Bl. Fl. 115●	6-3 9/16x3 13/16	236	7.5	200	115-3700	Own‡	3	Own	Hy ½	T	** -3.70
.....H54	116	....	4800	▼2560	6.00/16S	15S	O-Thrift Mas.	6-3 1/16x3 1/16	236	7.5	200	112-3700	Own‡	§3	Own	Hy ½	T	** -3.90
(c.f.).....J54	125	....	†6900	▼2855	15S	7.50/17S†	O-Thrift Mas.	6-3 1/16x3 1/16	236	7.5	200	112-3700	Own‡	§3	Own	HyF	H	†† -4.57
.....K54	125	....	7000	▼2675	15S	7.50/17S	O-Load Mas.	6-3 1/16x3 1/16	236	7.5	192	110-3600	Own‡	§3	Own	HyF	H	** -5.14
(c.f.).....L54	137	....	8800	▼3195	7.00/17S	7.00/18	O-Thrift Mas.	6-3 1/16x3 1/16	236	7.5	200	112-3700	Own‡	§4	Own	HyF	H	** -5.14
.....M54	137	....	10000	▼2950	7.00/17S	7.00/18	O-Load Mas.	6-3 1/16x3 1/16	236	7.5	192	110-3600	Own‡	§4	Own	HyF	H	** -5.14
.....R54	161	....	12000	▼4190	6.50/20D	7.50/20	O-Thrift Mas. ::	6-3 1/16x3 1/16	236	7.5	200	112-3700	Own	4	Own	HyF	H	□ -6.17
.....N54	137	....	14000	▼3820	6.50/20D	7.50/20	O-Thrift Mas. ::	6-3 1/16x3 1/16	236	7.5	200	112-3700	Own	4	Own	HyF	H	□ -6.17
.....P54	161	....	14000	▼3925	6.50/20D	7.50/20	O-Thrift Mas. ::	6-3 1/16x3 1/16	236	7.5	200	112-3700	Own	4	Own	HyF	H	□ -6.17
.....SV54	137	....	15000	▼4280	7.50/20D	9.00/20^♦	O-Load Mas.▲▲	6-3 1/16x3 1/16	236	7.5	192	110-3600	Own	4	Own	HyF	H	□□ -6.17
.....SW54	161	....	15000	▼4385	7.50/20D	9.00/20^♦	O-Load Mas.▲▲	6-3 1/16x3 1/16	236	7.5	192	110-3600	Own	4	Own	HyF	H	□□ -6.17
.....SX54	179	....	15000	▼4515	7.50/20D	9.00/20^♦	O-Load Mas.▲▲	6-3 1/16x3 1/16	236	7.5	192	110-3600	Own	4	Own	HyF	H	□□ -6.17
(c.o.e.).....SS54	110	....	15000	▲▼4795	7.50/16S*	9.00/16S	O-Load Mas.▲▲	6-3 1/16x3 1/16	236	7.5	192	110-3600	Own	4	Own	HyF	H	□□ -6.17
(c.o.e.).....ST54	134	....	15000	▲▼4860	7.50/20D	9.00/20^♦	O-Load Mas.▲▲	6-3 1/16x3 1/16	236	7.5	192	110-3600	Own	4	Own	HyF	H	□□ -6.17
(c.o.e.).....SU54	158	....	15000	▲▼4945	7.50/20D	9.00/20^♦	O-Load Mas.▲▲	6-3 1/16x3 1/16	236	7.5	192	110-3600	Own	4	Own	HyF	H	□□ -6.17
Dodge.....C-1-B6	108	116	4900	1970	6.00/16S	6.50/16S	Own T-334	6-3 1/4x4 5/8	230	7.3	194	110-3600	Own ND	3	Own T-334	Hy ½	H	4.10-4.78
.....C-1-C6	116	116	5800	2450	7.00/15S	7.00/15S	Own T-336	6-3 1/4x4 5/8	230	7.3	194	110-3600	NP-89905	3	Own T-336	Hy ½	H	4.10-4.78
.....C-1-DU6	102	117	7900	2815	6.50/16S	8.25/16S	Own T-164	6-3 1/4x4 5/8	230	7.3	191	103-3600	NP-88490	3	Own T-164	HyF	H	** -4.89
.....C-1-D6	116	126	8000	2775	6.00/16S△	7.50/17S	Own T-338	6-3 1/4x4 5/8	230	7.3	194	110-3600	NP-89970	3	Own T-338	HyF	H	4.10-4.89
(c.f.).....C-1-D6	116	126	8000	2580	7.00/16S	7.50/17S	Own T-362	6-3 1/4x4 5/8	230	7.3	194	110-3600	NP-90820	3	Own T-362	HyF	H	4.10-4.89
.....C-1-EU6	142	142	10100	3270	7.50/16S*	9.00/16S	Own T-165	6-3 1/4x4 5/8	230	7.3	191	103-3600	NP-88500	4	Own T-165	HyF	H	** -5.83
(School Bus).C-1-FS6	153	153	12000	4010	6.50/20D	7.00/20	Own TS-342	6-3 1/4x4 5/8	230	7.3	194	110-3600	NP-89960	4	Own TS-342	HyF	H	5.63-6.83
.....C-1-F6	129	153	14000	4000	6.50/20D	7.50/20	Own T-342	6-3 1/4x4 5/8	230	7.3	194	110-3600	NP-89960	4	Own T-342	HyF	H	5.63-6.83
(c.f.).....C-1-F6	108	129	14000	3800	6.50/20S	7.50/20	Own T-364	6-3 1/4x4 5/8	230	7.3	194	110-3600	NP-90360	4	Own T-364	HyF	H	5.63-6.83
.....C-1-G6	129	171	14500	4075	6.50/20D¶	8.25/20	Own TX-342	6-3 7/8x4 1/2	251	7.0	210	120-3600	NP-90360	4	Own TX-342	HyF	H	6.29-6.83
.....C-1-GA6	129	171	14500	4200	6.50/20D¶	8.25/20	Own TX-342	6-3 7/8x4 1/2	251	7.0	210	120-3600	NP-90360	4	Eat A4-1350	SFd	H	5.83-8.81
.....C-1-G8	129	171	14500	4125	6.50/20D¶	8.25/20	Own VTX-342	8-3 7/8x3 1/4	241	7.5	220	133-3800	NP-90360	4	Own VTX-312	HyF	H	6.29-6.83
.....C-1-GA8	129	171	14500	4250	6.50/20D¶	8.25/20	Own VTX-342	8-3 7/8x3 1/4	241	7.5	220	133-3800	NP-90360	4	Eat A4-1350	SFd	H	5.83-8.81
.....C-1-PW6	126	126	8700	3950	7.50/16S	9.00/16S	Own T-137	6-3 1/4x4 5/8	230	7.3	191	103-3600	NP-89960	4	Own T-137	HyF	H	4.89-5.83
Ford Courier																		
Sedan Divy.....	116	116	4600	▲3231	6.70/15S	7.10/15S	Own	6-3 5/8x3 29/64	223	7.2	193	115-3900	Own	3	Own	Hy ½	H	4.09-4.27
Sedan Divy.....	116	116	4600	▲3331	6.70/15S	7.10/15S	Own	8-3 1/2x3 7/64	239	7.2	214	130-4200	Own	3	Own	Hy ½	H	4.09-4.27
F-100																		
Cowl.....	110	110	4800	2298	6.00/16S	6.50/16S	Own	6-3 5/8x3 29/64	223	7.2	193	115-3900	Own	3	Own	Hy ½	H	3.92-4.27
Cowl.....	110	110	4800	2398	6.00/16S	6.50/16S	Own	8-3 1/2x3 7/64	239	7.2	214	130-4200	Own	3	Own	Hy ½	H	3.92-4.27
F-250																		
Cowl.....	118	118	6900	2628	6.50/16S	7.50/17S	Own	6-3 5/8x3 29/64	223	7.2	193	115-3900	Own	3	Own	HyF	H	** -4.86
Cowl.....	118	118	6900	2728	6.50/16S	7.50/17S	Own	8-3 1/2x3 7/64	239	7.2	214	130-4200	Own	3	Own	HyF	H	** -4.86
P-350 Parcel Divy. W/S.....	104	122	7800	2993	7.00/16S	7.50/17S	Own	6-3 5/8x3 29/64	223	7.2	193	115-3900	Own	3	Own	HyF	H	** -4.86
F-350																		
Cowl.....	130	130	9500	3083	7.00/17S	7.50/16	Own	6-3 5/8x3 29/64	223	7.2	193	115-3900	Own	3	Own	HyF	H	5.14-5.83
Cowl.....	130	130	9500	3183	7.00/17S	7.50/16	Own	8-3 1/2x3 7/64	239	7.2	214	130-4200	Own	3	Own	HyF	H	5.14-5.83
B-500 School Bus																		
Bus Ch.....	154	154	12000	3900	6.50/20D	7.50/20	Own	6-3 5/8x3 29/64	223	7.2	193	115-3900	Own	4	Own	HyF	H	6.20-6.80
Bus Ch.....	154	154	12000	4000	6.50/20D	7.50/20	Own	8-3 1/2x3 7/64	239	7.2	214	130-4200	Own	4	Own	HyF	H	6.20-6.80
F-500																		
Cab.....	130	154	14000	▲4170	6.50/20D	7.50/20	Own	6-3 5/8x3 29/64	223	7.2	193	115-3900	Own	4	Own	HyF	H	6.20-6.80
Cab.....	130	154	14000	▲4270	6.50/20D	7.50/20	Own	8-3 1/2x3 7/64	239	7.2	214	130-4200	Own	4	Own	HyF	H	6.20-6.80
P-500 Parcel Divy. W/S.....	130	130	14000	4025	7.00/18■	7.50/20	Own	6-3 5/8x3 29/64	223	7.2	193	115-3900	Own	3	Own	HyF	H	6.20-6.80
Mar. Her......DVL-4	90	118	6750	.....	7.50/16S	8.25/18S	Willys MB	4-3 1/2x4 3/8	134	6.4	105	60-4000	Own	3	(Front Drive)	.....	.....	** -7.10
Studebaker.....3R5	112	112	4600	2115	6.00/16S	6.50/16S	Own 1R	6-3x4	170	7.5	138	85-4000	Own 673519	3	Own 680233	Hy	H	4.09-4.89
.....3R6	112	112	4800	2355	6.00/16S	6.50/16S	Own 6R	6-3 9/16x4 3/4	246	7.0	205	102-3200	Own 679807	3	Own 680233	Hy	H	4.09-4.89
.....3R10	122	122	6100	2400	6.50/16S	7.50/16S	Own 1R	6-3x4	170	7.5	138	85-4000	Own 673519	3	Own 682041	SF	H	4.86-5.57
.....3R11	122	122	6300	2640	6.50/16S	7.50/16S	Own 6R	6-3 9/16x4 3/4	246	7.0	205	102-3200	Own 679146	3	Own 682041	SF	H	4.11-4.86
.....3R15-21	121	121	7600	2860	7.00/17S	7.50/16	Own 2R	6-3x4	170	7.5	138	85-4000	Own 680437	4	Own 682683	Hy	H	5.14-5.83
.....3R14-21	121	121	7800	3100	7.00/17S	7.50/16	Own 6R	6-3 9/16x4 3/4	246	7.0	205	102-3200	Own 680438	4	Own 682683	Hy	H	5.14-5.83
.....3R15-31	131	131	9300	2920	7.00/17S	7.50/16	Own 2R	6-3x4	170	7.5	138	85-4000	Own 680437	4	Own 682683	Hy	H	5.14-5.83
.....3R14-31	131	131	9500	3160	7.00/17S	7.50/16	Own 6R	6-3 9/16x4 3/4	246	7.0	205	102-3200	Own 680438	4	Own 682683	Hy	H	5.14-5.83
.....3R-16	131	195	14000	3630	6.50/20D	8.25/20	Own 4R	6-3 9/16x4 3/4	246	7.0	205	102-3200	Own 681758	4	Own 680399▲●	SF	H	5.14-6.66
.....3R-28	131	195	14000	3700	6.50/20D	8.25/20	Own VT	8-3 5/8x3 1/4	233	7.5	202	127-4000	Own 681758	4	Own 680399▲■	SF	H	5.83-6.66
.....3R-16B	131	195	15000	3735	6.50/20D	8.25/20	Own 4R	6-3 9/16x4 3/4	246	7.0	205	102-3200	Own 682927	4	Own 680399▲●	SF	H	5.14-6.66
.....3R-28B	131	195	15000	3805	6.50/20D	8.25/20	Own VT	8-3 5/8x3 1/4	233	7.5	202	127-4000	Own 682927	4	Own 680399▲■	SF	H	5.83-6.66
Willys Jp......CJ-3B	80	80	3500	*2191	6.00/16S	7.00/15S	Own CJ-3B	4-3 1/8x4 3/8	134	6.9	114	70-4000	WG T90C	‡6	Spi 44-2	Hy ½	H	** -5.38
.....475-4WD	118	118	5300	*3115	7.00/16S	.....	Own 475	4-3 1/8x4 3/8	134	6.9	114	72-4000	WG T90C	‡6	Spi 53	Hy ½	H	** -5.38
.....6226-4WD	118	118	5500	*3200	7.00/16	7.00/16	Kai 6-226	6-3 9/16x4 3/8	226	6.9	190	115-3650	WG SK4359GG	‡6	Tim 5140NX4	SF	.....	** -4.88

KEY TO DEFINITIONS

MAKE AND MODEL

Only Domestic Truck Models are listed.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard tire size. Dual rears are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

KEY TO ABBREVIATIONS

MAKES—ALL

Eat—Eaton.
Her—Hercules.
Kai—Kaiser Motors Corp.
N.P.—New Process.
O or Ow—Own.
Op or Opt—Optional.
Spi—Spicer.
T or Tim—Timken-Detroit Axle Co.
WG—Warner Gear.
Wau—Waukesha.

REAR AXLE

Final Drive and Type

F—Full-floating.
H or Hy—Hyphoid.
d—Dual range axle.
S—Spiral bevel.
½—Semi-Floating.
T—Torque Tube.

GEAR RATIOS

(**)—Only one ratio.

Drive and Torque

H—Hotchkiss (springs).

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.e.—Cab-Over-Engine design.
▲—Denotes "Includes Cab" when used with weights or prices.

CHEVROLET

†—6500 lb. G. V. W. when 6.50/16 dual tires are used on rear.
▼—Includes spare tire, full fuel tank and cooling system.
△—7.50/20 can be used on the front with no decrease in G.V.W. when 8.25/20 are used on dual rear wheels.
::—Own Loadmaster engine available at extra cost.
♦—8.25/20 front tires are required when 9.00/20 dual rears are used.
‡—Hydramatic optional.
§—Heavy duty 3 speed transmission optional.
††—Also available in 5.14 ratio.
□—5.43 available.
□□—Two speed axle available.
‡—Powerglide optional.
●—Blue Flame 125 engine optional.
▲▲—Jobmaster 261 engine optional.

DODGE

△—Front only; Rear 7.00/16S.
●—Front only; Rear 8.25/16S.
¶—Front only; Rear 7.50/20.

FORD

■—Front only; rear, 8.25/18S.

STUDEBAKER

▲—H.D. 6.20 or 6.80 optional.
●—Two speed 5.93-8.10 optional.
■—Two speed 6.48-8.86 optional.

WILLYS

●—Complete vehicle-Pick-up Type body.
‡—Three speed transmission. 2 speed transfer case.

WHEEL TYPE TRACTORS

Line Number	TRACTOR MAKE AND MODEL	GENERAL						DRAW-BAR		OVERALL DIMENSIONS			WHEELS				HP. RATING					Travel Speeds at Normal Governed Engine R.P.M. (M.P.H.) with Standard Wheels		
						TREAD (In.)								STEEL Diam. and Face		TIRE SIZE								
		Wheelbase (In.)	Minimum Turning Radius Outside (Ft.)	Ground Clearance (In.)	Shipping Weight with Rubber Tires (Lb.)	Minimum	Maximum	Lateral Adjustment (In.)	Height Above Ground (In.)	Length (In.)	Width (In.)	Height—To Highest Point (In.)	Standard Equipment	Front (In.)	Rear (In.)	Front (In.)	Rear (In.)	Belt	Drawbar	Nebraska Test Number	Power Take-off	Number of Forward Speeds	Number of Reverse Speeds	First	Second	Third
1	Allis-Chalmers...1B	57 7/8	7	12 1/2	2365	40 1/2	52 1/2	....	11 1/2	97 1/2	52 5/8	54 1/2	RT	.....	.....	5.00/15	9/24	22.87	18.00	....	Op	3	1	3.50	5.30	10.0
2	.....B	73 3/8	7 3/4	21 3/4‡	2060	40 1/2	52 1/2	22 1/4	12 1/2	110 1/4	52 11/16	62 3/4	RT	.....	.....	4.00/15	9/24	22.87	19.51	302	Op	3	1	2.75	4.25	8.50
3	.....CA	81 7/8	7 1/2	22 1/2	3000	52	80	14 5/8	11	124 5/8	67 5/8▼	76 3/8	RT	.....	.....	5.00/15	10/24	26.62	23.55	453	Op	4	1	2.00	3.50	4.50
4	.....G	68 1/2	6 1/2	17 3/8	1285	36	64	7 5/8	13	116	36▼	55 1/16	RT	.....	.....	4.00/12	6/30	10.91■	9.59■	398	....	4	1	1.60	2.26	3.57
5	.....WD-45	88	8 1/2	28 1/8	4465	56	90	8 1/2	16 1/4	128	74 11/16▼	81 1/2	RT	.....	.....	5.50/16	12.00/28	45.27	40.01	499	St	4	1	2.40	3.75	5.00
6	Brockway 49D	76 1/2	10 1/4	20	3600	48	76	28 1/2	16	115	63	.....	RT	.....	.....	6.00/16	11/28	35.00	32.00	....	St	4	1	2.16	3.34	4.71
7	.....49G	76 1/2	10 1/4	20	3600	48	76	28 1/2	16	115	63	.....	RT	.....	.....	6.00/16	11/28	31.75	28.00	....	St	4	1	2.16	3.34	4.71
8	.....49K	76 1/2	10 1/4	20	3600	48	76	28 1/2	16	115	63	.....	RT	.....	.....	6.00/16	11/28	.....	.....	.....	St	4	1	2.16	3.34	4.71
9	Case .....VA	75 1/4	9 3/8	15 5/8	.....	48	72	16	14 1/4	113 1/2	64 3/4	53 1/4	Op	25x4	38x8	6.00/16	10/28	.....	.....	NT	Op	4	1	2.30	3.30	4.00
10	.....VAC	83	8 1/2	22 5/8	.....	48	88	16	16 1/4	122 1/2	80 1/4	58 1/4	Op	21x3 1/2	42x3	5.00/15	9/34	.....	.....	NT	Op	4	1	2.70	3.50	4.50
11	.....VAI	75 1/4	9 3/8	15 5/8	.....	44	72	N	12 1/8	109 5/8	65	51 1/2▼	RT	.....	.....	6.00/16	9/24	.....	.....	NT	Op	4	1	2.64	4.55	5.82
12	.....S	66	10	.....	.....	46	.....	18	13	108 1/2	56 1/4	51▼	Op	25x4	42x8	5.00/15	11/26	.....	.....	NT	Op	4	1	2.50	3.50	5.00
13	.....SC	82 1/2	Piv	.....	.....	44	80	17	16 3/4	133	74 1/2	56▼	Op	24 3/4x4	48x2 1/2	5.00/15	10/38	.....	.....	367	Op	4	1	2.50	3.50	4.75
14	.....SI	65 3/4	12	.....	.....	48 1/2	.....	N	15 7/8	110 3/4	61.9	51 1/4▼	RT	.....	.....	6.00/16	12.00/24	.....	.....	NT	Op	4	1	2.52	3.57	4.93
15	.....D	66 5/8	10	.....	.....	50	.....	29	13	118	61 1/2	50 5/8	Op	28x8	42x11 1/4	6.00/16	12/26	.....	.....	349	Op	4	1	2.25	3.75	5.25
16	.....DC	89	Piv	.....	.....	48	84	21	16.8	140	81	58▼	Op	25x4	48x2 1/2	5.50/16	11/38	.....	.....	340	Op	4	1	2.00	3.75	5.00
17	.....DI	68 1/16	12	.....	.....	52	.....	N	17	111	67.2	51 1/4▼	RT	.....	.....	6.00/16	13.00/24	.....	.....	NT	Op	4	1	1.90	3.62	5.00
18	.....LA	82	13	.....	.....	59 1/2	.....	33 1/4	15	140	72 1/2	61 1/8▼	Op	30x6	48x12	7.50/18	14/30	.....	.....	NT	Op	4	1	2.50	3.33	4.33
19	.....LAI	82	16 1/4	.....	.....	59 1/2	.....	N	16	131	73 7/8	59▼	RT	.....	.....	7.50/18	14.00/28	.....	.....	NT	Op	4	1	1.73	3.12	4.13
20	.....VAC-14	77	.....	.....	.....	48	88	16	15 1/4	114 3/4	80 1/4	58^	RT	.....	.....	5.00/15	11/28	.....	.....	.....	.....	4	1	2.25	3.00	4.00
21	..... 500 Diesel	87 3/4	.....	.....	.....	53 3/4	60 3/4	26 1/2	13	144 1/4	76 1/4	61 1/16^	RT	.....	.....	7.50/18	14/30	.....	.....	NT	Op	4	1	2.61	3.58	4.76
22	Cockshutt 20	79	7 1/3	24 1/2	2050	48	76	19 1/2	12 1/2	114	63	76	RT	.....	.....	5.00/15	10/24	30.45	26.74	474	Op	4	1	2.31	3.50	5.00
23	Rowcrop.....30	84 3/4	8 1/2	23	3600	56	84	21 1/2	13	127	74 1/2	78	RT	.....	.....	5.50/16	10/38	32.95	28.43	382	Op	4	1	3.12	4.50	6.25
24	40	89 1/2	12	26	5000	56	84	23 1/8	14 1/8	134 1/2	75	79 1/2	RT	.....	.....	6.00/16	12/38	45.59	40.06	442	Op	6	2	1.62	2.75	3.62
25	.....50G	89 1/2	12	26	5860	56	84	23 1/8	14 1/8	134 1/2	75 1/2	79 1/2	RT	.....	.....	7.50/16	14/34	57.81	51.51	488	Op	6	2	1.52	2.57	3.53
26	.....50D	89 1/2	12	26	5990	56	84	23 1/8	14 1/16	134 1/2	75 1/2	79 1/2	RT	.....	.....	7.50/16	14/34	53.25	47.16	487	Op	6	2	1.52	2.57	3.53
27	Corbitt.....G50	86	8 1/2	20	3450	56	84	23	18	128	74▼	69 1/2	RT	.....	.....	5.50/16	10/38	36.22	32.24	422	St	4	1	2.50	3.60	5.00
28	.....K50	86	8 1/2	20	3450	56	84	23	18	128	74▼	69 1/2	RT	.....	.....	5.50/16	10/38	29.10	25.90	....	St	4	1	2.50	3.60	5.00
29	.....D50	86	8 1/2	20	3550	56	84	23	18	128	74▼	69 1/2	RT	.....	.....	5.50/16	10/38	35.80	31.80	....	St	4	1	2.50	3.60	5.00
30	Deere, John 50	90	8 11/12	24	4435	56	88	8 1/4	16 3/32	132 3/4	86 5/8	81 1/4	RT	.....	.....	5.50/16	11/38	30.97	27.49	486	(f)	6	1	1.50	2.50	3.50
31	60	90	8 11/12	26	5300	56	88	8 1/4	15 7/16	139	86 5/8	84 1/2	RT	.....	.....	6.00/15	12/38	41.57	36.94	472	(f)	6	1	1.50	2.50	3.50
32	.....60 Standard	75 3/4	13 3/8	24 1/4	5347	58	62	27	14 3/4	123 3/8	70 5/8	74 1/2	RT	.....	.....	6.00/16	14/30	.....	.....	.....	(f)	6	1	1.50	2.50	2.75
33	.....60 Orchard	75 3/4	13 3/8	21 1/2	5332	54 7/16	58 7/16	27	12 1/2	125 1/2	71 5/8	57	RT	.....	.....	6.00/16	14/26	.....	.....	.....	(f)	6	1	1.50	2.75	3.25
34	70	90	9 1/2	25 1/8	5945	60	88	8 1/4	.....	136 1/4	86 5/8	88 1/16	RT	.....	.....	6.00/16	12/38	50.35	44.21	493	(f)	6	1	2.50	3.50	3.50
35	..... 70 Hi-Crop	98 11/16	16 1/2	30 1/8	7410	60	90	.....	14 5/8	153	77 3/4	101	RT	.....	.....	6.00/16	12/38	.....	.....	.....	St	6	1	2.50	3.50	4.50
36	.....M	70	8 1/2	21	2750	38	52	15 3/4	16	110	51	56	RT	.....	.....	5.00/15	9/24	21.42	19.19	387	St	4	1	1.62	3.12	4.25
37	.....R	85 1/8	14 1/4	25 1/4	7500	62 1/2	62 1/2	40	15 3/4	147	79 1/2	78 1/8	RT	30x6	54x12	7.50/18	14/34	50.96	45.69	406	Op	5	1	2.13	3.33	4.25
38	..... 60 Hi-Crop	98 11/16	16 1/2	30 1/8	6685	60	90	21	14 1/16	98 11/16	102	152 1/2	RT	.....	.....	7.50/20	11/38	.....	.....	NT	(f)	6	1	1.50	2.25	3.50
39	.....MT	82 1/4	8 1/2	21	.....	48	96	15 3/4	16 1/2	125 3/8	89 1/4	73 3/4	RT	.....	.....	5.00/15	9/34	21.57	18.77	....	St	4	1	1.62	3.12	4.25
40	.....MI	62	8	.....	.....	48	52	....	13 3/8	110	62	58 1/2	RT	.....	.....	5.00/15	9/24	21.42	19.19	....	St	4	1	1.62	3.12	4.25
41	Ferguson.....TO 30	70	8	20	2480	48	76	17 1/16	6 11/16	115	63 1/2	51 1/4	RT	.....	.....	4/19	10/28	30.27	25.24	466	St	4	1	3.32	4.57	6.29
42	Ford.....NAA	73 7/8	8.8	21	2550	48	76	20	34 1/4	118 7/8	64 3/4	57 1/4	RT	.....	.....	4.00/19	10/28	32.41	26.82	494	....	4	1	2.77	3.56	4.90
43	Friday Tractor...048	79	12	12	3580	57	57	26	15	127	75	55	RT	.....	.....	6.00/16	13/24	46.00	34.63	....	Op	10	2	1.90	2.80	3.40
44	Inter- C26K	85	8 1/2	25	3100	56	84	11	14 1/4	126	74 1/2	73 1/2	RT	.....	.....	5.50/16	10/38	NT	NT	NT	St	4	1	2.70	3.80	5.30
45	continental....DF	85	8 1/2	25	3250	56	84	11	14 1/4	126	74 1/2	86	RT	.....	.....	5.50/16	11/38	35.93	33.10	498	St	4	1	2.83	4.09	5.68
46	.....C28	85	8 1/2	25	3100	56	84	11	14 1/4	126	74 1/2	73 1/2	RT	.....	.....	5.50/16	10/38	31.23	26.75	400	St	4	1	2.70	3.80	5.30
47	.....DE or D28	85	8 1/2	25	3250	56	84	11	14 1/4	126	74 1/2	86	RT	.....	.....	5.50/16	10/38	30.74	27.60	420	St	4	1	2.46	3.54	4.96
48	Inter- .....Super C	82	7 1/2	23	3290	6 1/2	100	....	Ad	123	80 1/2	85 1/2	RT	.....	.....	5.00/15	10/36	24.45	21.67	458	Op	4	1	2.50	3.88	5.13
49	national.....Cup	69	8 1/4	20 1/2	1430	40	56	N	Ad	99	48 1/4	76 1/4	RT	.....	.....	4.00/12	8/24	9.76	8.89	386	Op	3	1	2.13	3.13	6.50
50	Harvester Super A	71	8 1/2	22	2385	40	70	14	Ad	107	55 7/8	81 3/4	RT	.....	.....	5.00/15	9/24	19.06	17.25	3.29	Op	4	1	2.38	3.63	4.88
51	.....Super AV	71 1/2	8 3/4	27	2828	44	68	N	Ad	115	60 5/8	88 1/2	RT	.....	.....	4.00/19	9/36	19.00	17.00	N	Op	4	1	3.00	4.88	6.38
52	.....Super H	89	8	19	4100	8	100	14 1/2	Ad	133	75 1/2	85 1/2	Op	.....	.....	5.50/16	11/38	27.90	25.50	492	Op	5	1	2.63	3.75	5.00
53	.....Super HV	91 1/2	12 3/8	30	5070	60	72	N	Ad	146 1/2	85 7/8	95 3/8	RT	.....	.....	6.00/20	12/36	27.50	24.50	N	Op	5	1	2.50	3.50	4.75
54	..... Super M	89	8 1/8	19 1/2	5385	8 1/2	100	15	Ad	134 1/2	84 1/2	95	Op	.....	.....	6.00/16	12/38	48.56	44.24	475	Op	5	1	2.63	3.75	5.00
55	.....Super MD	91	8 1/4	19 1/2	5710	8 1/2	100	15	Ad	136	84 1/2	91	Op	.....	.....	6.00/16	12/38	48.32	43.91	477	Op	5	1	2.63	3.75	5.00
56	..... Super MV	91 1/2	12 3/8	36	6120	60	72	N	Ad	146 1/2	85 7/8	105	RT	.....	.....	6.00/16	13/36	48.50	43.00	N	Op	5	1	2.88	3.88	5.00
57	.....Super MDV	93	13	36	6430	60	72	N	Ad	148	85 7/8	104	RT	.....	.....	6.00/20	13/36	48.50	42.00	N	Op	5	1	2.88	3.88	5.00
58	.....Super W-4	66 1/2	10	.....	3915	46	52	14	Ad	114	66 5/8	80 1/2	Op	.....	.....	5.50/16	13/26	27.89	25.67	491	Op	5	1	2.38	3.50	4.63
59	.....Super W-6	76 1/2	11	.....	5115	51	61	14	Ad	125	70 1/2	93 1/2	Op	.....	.....	6.50/18	14/30	27.89	25.67	476	Op	5	1	2.63	3.63	4.75
60	..... Super WD-6	76 1/2	11	.....	5535	51	61	14	Ad	125	70 1/2	92	Op	.....	.....	6.50/18	14/30	48.47	43.77	478	Op	5	1	2.63	3.63	4.75
61	..... Super WD-9	83 1/2	12 1/2	.....	6890	52	66	14	Ad	131	75 3/4	82	Op	.....	.....	7.50/18	14/34	53.24	48.45	N	Op	5	1	2.38	3.13	4.50
62	..... Super WRD-9	83 1/2	12 1/2	.....	7290	52	66	16	Ad	139 1/2	81	83	Op	34x6	54x12	7.50/18	15/34	53.00	48.00	N	Op	5	1	2.50	3.75	4.75
63	International Super A	71 1/8	9 1/4	15 5/8	2155	40R	68R	18 3/4	10	106 3/4	55 7/8	82 3/4	RT	.....	.....	4.00/15	9.00/24	19.06	17.35	....	St	4	1	2.30	3.60	4.70
64	Love	87	8 11/12	21 1/2	4000	54	78	27	Ad	134	76	66 1/2	RT	.....	.....	6.00/16	13/24	37.00	31.00	....	Op	10	2	2.75	4.75	8.80
65	Massey-..44 Sp. RS	87 1/16	9	16 7/8	5383	51 1/2	88 5/8	21 1/16	28 1/2	132 1/4	79	79 1/4	RT	.....	.....	9.00/10	11/38	50.29	45.85	510	Op	5	1	2.46	3.72	4.96
66	Harris..44 Sp. RT	88	9	16 7/8	5283	51 1/2	88 5/8	....	28 1/2	130 1/8	79	80 1/4	RT	.....	.....	6.50/16	11/38	50.29	45.85	510	Op	5	1	2.54	3.84	5.11
67	.....44 Spec. Std.	88 1/16	12 1/2	13 1/2	5325	58	58	....	26	136 5/8	73 7/16	75 1/2	RT	.....	.....	7.50/16	14/30	50.29	45.85	510	Op	5	1	2.27	3.42	4.55
68	.....44 Spec. HA	99 7/8	13 1/2	16 7/8	5483	51 1/2	88 5/8	21 1/16	28 1/2	146	79	79 1/4	RT	.....	.....	6.50/16	11/38	50.29	48.85	510	Op	5	1	2.40	3.62	4.82
69	.....Std. 44	79 1/2	11	12	4350	54 1/8	54 1/8	21 1/16	25 1/2	129	68 1/16	76 1/2	RT	28x4 1/2	48x12	6.00/16	13/30	47.04	41.36	389	Op	5	1	2.21	3.33	4.43

For Key to References and Abbreviations See Pages 80 and 81

WHEEL TYPE TRACTORS

Travel Speeds at Normal Governed Engine R.P.M. with Standard Wheels				ENGINE							FUEL										BELT PULLEY				CAPACITIES								
Fourth	Fifth	Sixth	Reverse	Make and Model	Number of Cylinders—Bore and Stroke (In.)	Piston Disp. (Cu. In.)	R.P.M. at Governed Speed	Valve Arrangement	Number of Main Bearings	Diameter of Main Bearings	Standard	Optional	Ignition—Make	Carburetor or Injector Pump—Make	Air Cleaner—Make	Governor—Make	Oiling System—Type	Cooling System—Type	Clutch—Make and Type	Final Drive—Type	Diameter (In.)	Face (In.)	Normal R.P.M.	Steering Type	Cooling System (Gal.)	Fuel Tank (Gal.)	Crankcase (Qts.)	Transmission (Qts.)	Final Drive Case (Qts.)	Starting Method	Line Number
.....	.....	.....	3.80	Own....1B	4-3⅜x3½	125	1500	I	3	2¼	G	.....	FM	Zen	Don	Own	P	Pu	Roc...SP	SG	8	5½	1130	FK	2	13	4	7	4‡	Ele	1
.....	.....	.....	3.00	Own.....B	4-3⅜x3½	125	1400	I	3	2¼	G,D	.....	FM	Zen	Don	Own	P	Pu	Roc...SP	SG	8	5½	1130	FK	2	13	4	8	††¾	Ele	2
11.25	.....	.....	3.50	Own...CE	4-3⅜x3½	125	1650	I	3	2¼	G	K	DR	Zen	Don	Own	P	Pu	Roc...SP	SG	8	5½	1220	...	2	13	4	8½	††1½	HE	3
6.91	.....	.....	1.96	Cont...N62	4-2⅝x3½	62	1800	L	2	2	G	.....	DR	Mar	Don	Cont	P	TS	Roc...SP	....	6	4	1950	FK	1⅝	5	3½	8	.....	Ele	4
11.25	.....	.....	3.00	Own...WD	4-4x4½	266	1400	I	3	2½	G,D	.....	DR	Zen	Uni	Own	P	Pu	Roc...SP	SG	9	6½	1260	SA	3½	15	6	17	1¾	Ele	5
12.00	.....	.....	1.22	ContGD157	4-3⅝x4⅜	157	2000	I	3	2⅜	O	.....	AL	Bos	Don	.....	P	TS	Roc...SP	CH	8½	6¼	1650	FK	5	12½	5	14	4	Ele	6
5.00	.....	.....	1.69	Cont...F162	4-3⅞x4⅜	162	2400	I	3	2½	G	.....	AL	Mar	Don	.....	P	TS	Roc...SP	CH	8½	6¼	1800	FK	5	12½	5	14	4	Ele	7
15.00	.....	.....	1.69	Cont...F140	4-3x4⅜	140	....	I	3	2½	K	.....	AL	Mar	Don	.....	P	TS	Roc...SP	CH	8½	6¼	1800	FK	5	12½	5	14	††2	Ele	8
10.30	.....	.....	3.30	Own...VA	4-3¼x3¾	124	1425	I	3	2¼	G	D	Own	Mar	Vor	Own	P	Pu	.....SP	SG	10¼	6	969	FK	3¼	10	4	28	‡8	HE	9
11.30	.....	.....	3.70	Own...VA	4-3¼x3¾	124	1425	I	3	2¼	G	D	Own	Mar	Vor	Own	P	Pu	.....SP	SG	10¼	6	969	SA	3¼	10	4	28	‡8	HE	10
14.00	.....	.....	3.64	Own...VA	4-3¼x3¾	124	1425	I	3	2¼	G	D	Own	Mar	Vor	Own	P	Pu	.....SP	SG	10¼	6	969	FK	3¼	10	4	28	‡8	HE	11
10.00	.....	.....	2.75	Own.....S	4-3⅝x4	165	1600	I	3	2½	G	D	Own	Zen	Uni	Own	P	Pu	TD...DO	CH	9¼	6⅝	1112	FK	4	15¼	5	36	.....	HE	12
10.00	.....	.....	2.75	Own.....S	4-3⅝x4	165	1600	I	3	2½	G	D	Own	Zen	Uni	Own	P	Pu	TD...DO	CH	9¼	6⅝	1112	SA	4	15¼	5	36	.....	HE	13
10.00	.....	.....	2.82	Own.....S	4-3⅝x4	165	1600	I	3	2½	G	D	Own	Zen	Uni	Own	P	Pu	Roc..MD	CH	9¼	6⅝	1112	FK	4	14	5	36	.....	HE	14
10.50	.....	.....	3.00	Own....D	4-3⅞x5½	259	1200	I	3	2¼	G	D	Own	Zen	Own	Own	P	Pu	TD...DO	CH	12¼	7¼	818	FK	7¼	18	7	40	.....	HE	15
10.00	.....	.....	2.75	Own....D	4-3⅞x5½	259	1200	I	3	2¼	G	D	Own	Zen	Own	Own	P	Pu	TD...DO	CH	12¼	7¼	818	SA	7¼	18	7	40	.....	HE	16
10.20	.....	.....	2.88	Own....D	4-3⅞x5½	259	1200	I	3	2¼	G	D	Own	Zen	Own	Own	P	Pu	Roc..MD	CH	12¼	7¼	818	FK	5¾	19	7	40	.....	HE	17
10.00	.....	.....	2.75	Own...LA	4-4½x6	403	1100	I	3	3	G	D	Own	Zen	Own	Own	P	Pu	TD...DO	CH	13	8¼	779	FK	15¼	31	12	68	.....	HE	18
8.60	.....	.....	2.48	Own...LA	4-4½x6	403	1100	I	3	3	G	D	Own	Zen	Own	Own	P	Pu	.....MD	CH	13	8¼	779	FK	15¼	31	12	68	.....	HE	19
12.00	.....	.....	3.25	Own...VA	4-3¼x3¾	....	1425	I	3	2¼	G	D	.....	Mar	Vor	Own	P	Pu	.....SP	SG	10¼	6	969	SA	3¼	10½	5	28	8	Ele	20
9.89	.....	.....	2.87	Own...500	6-4x5	377	1350	I	7	3	D	.....	.....	Bos	Don	Bos	P	Pu	Own...SP	CH	13	8¾	956	FK	14	30	14	63	.....	Ele	21
12.50	.....	.....	3.00	Cont...F140	4-3⅛x4⅜	140	1800	L	3	2¼	G	.....	AL	Mar	Don	Novi	P	Pu	BB....SP	SG	10	6½	1160	SF	3	12½	4	8	††3	Ele	22
13.50	.....	.....	4.00	Bu..4B153	4-3⅞x4½	153	1650	I	3	2½	G	D,O,LP	AL	M-Z	Don	Novi	P	Pu	BB....SP	SG	8¼	7½	1336	SF	3½	15	5	20	**	Ele	23
4.50	6.25	10.50	(e)	Bu..6B230	6-3⅛x4⅛	229	1650	I	7	2½	G	O,D,LP	AL	Zen	Don	Novi	P	Pu	BB....SP	SG	12	8½	1000	SF	4¾	21	6	40	**	Ele	24
4.32	5.95	9.85	(e)	Bu..6B273	6-3¾x4½	273	1650	I	7	2½	G	.....	AL	Zen	Don	Novi	P	Pu	BB....SP	SG	12	8½	1000	DFS	4¾	21	6	40	**	Ele	25
4.32	5.95	9.85	(e)	Bu.6DA273	6-3¾x4½	273	1650	I	7	2½	O	.....	.....	Bos	Don	Bos	P	Pu	BB....SP	SG	12	8½	1000	DFS	4¾	21	6	40	**	Ele	26
10.00	.....	.....	3.20	Le...D-176	4-3¾x4	176	1800	I	3	(a)	G	.....	DR	Zen	Uni	Le	P	Pu	BB....SP	SG	8	6½	1450	Piv	3¾	12	7	23	33	Ele	27
10.00	.....	.....	3.20	Le...D-201	4-4x4	201	1800	I	4	(a)	K	G	DR	Zen	Uni	Le	P	Pu	BB....SP	SG	8	6½	1450	Piv	3¾	12	7	23	33	Ele	28
10.00	.....	.....	3.20	He D1X4D	4-3⅝x4	166	1800	I	5	2¾	D	.....	.....	Bos	Uni	He	P	Pu	BB....SP	SG	8	6½	1450	Piv	4	12	6	23	33	Ele	29
4.50	5.75	10.00	2.50	Own....50	2-4⅛x5½	190	1250	I	2	2¼	G	K,D	DR	Mar	Don	Own	P	Pu	Own..MD	SG	9⅛	7¼	1250	FK	7	15½	7	18	.....	Ele	30
4.50	6.25	11.00	3.00	Own....60	2-5½x6¾	321	975	I	2	2¾	G	K,D,LP	DR	Mar	Don	Own	P	Pu	Own..MD	SG	12⅛	7⅝	975	FK	8¼	20½	8	28	.....	Ele	31
4.50	6.50	11.50	3.00	Own....60	2-5½x6¾	321	975	I	2	2⅝	G	K,D	DR	Mar	Don	Own	P	Pu	Own..MD	SG	12⅛	7⅝	975	SA	8¼	20	8	34	.....	Ele	32
4.50	6.50	11.25	2.75	Own....60	2-5½x6¾	321	975	I	2	2⅝	G	K,D	DR	Mar	Don	Own	P	Pu	Own..MD	SG	12⅛	7⅝	975	SA	8¼	20	8	34	.....	Ele	33
6.50	8.75	12.50	3.25	Own....70	2-5⅞x7	380	975	I	2	3¼	G	K,D,LP	DR	Mar	Don	Own	P	Pu	Own..MD	SG	12⅛	7⅝	975	FK	8½	24½	11	30	.....	Ele	34
6.50	8.75	12.50	3.25	Own....70	2-5⅞x7	380	975	I	2	3¼	G	K,D,LP	DR	Mar	Don	Own	P	Pu	Own..MD	CH	12⅛	7⅝	975	DA	8½	24½	11	30	††1¾	Ele	35
10.00	.....	.....	1.62	Own....M	2-4x4	101	1650	I	2	...	DR	Mar	Don	Own	Don	Own	P	TS	Au...SP	SG	7¼	6	1575	FK	3½	9	5	6½	1¾	Ele	36
5.33	11.50	.....	2.50	Own....R	2-5¾x8	416	1000	I	2	4	O	.....	.....	BS	BS	Don	Own	P	TS	Own..MD	SG	12¼	9	1000	WG	13	22	13	9	.....	Ele	37
4.50	6.25	11.00	3.00	Own....60	2-5½x6¾	321	975	I	2	2¾	G	K,D,LP	DR	Mar	Don	Own	P	Pu	Own..MD	CH	12⅛	7⅝	975	DA	8¼	20½	8	28	††1¾	Ele	38
10.00	.....	.....	1.62	Own....M	2-4x4	101	1650	I	2	2⅛	G	.....	DR	Mar	Don	Own	P	TS	Au....SP	SG	7¼	6	1575	FK	3½	9	5	7½	††2	Ele	39
10.00	.....	.....	1.62	Own....M	2-4x4	101	1650	I	2	2⅛	G	.....	DR	Mar	Don	Own	P	TS	Au....SP	SG	....	.....	.....	FK	3½	9	5	6½	††1½	Ele	40
13.13	.....	.....	3.83	Cont Z-129	4-3¼x3⅞	128	2000	I	3	2¼	G	.....	DR	Mar	D-V	Novi	P	Pu	RLA...SP	SB	9	6½	1358	FK	2½	10	5	24	.....	Ele	41
10.23	.....	.....	3.20	Own..EAE	4-3⅛x3.6	134	1750	I	3	2½	G	.....	Hol	Mar	HH	Novi	P	Pu	Lo....SP	IG	9	6	1358	DA	3¾	11	6	5	8½	Ele	42
5.10	6.40	9.20	2.80	Chr...Ind5	6-3¼x4⅜	218	1800	L	4	2½	G	.....	AL	Car	Uni	Pie	P	Pu	BB....SP	Hel	8¾	6⅝	1025	FK	5	18½	5	6	6	Ele	43
10.70	.....	.....	3.40	Cont...F162	4-3⅛x4⅜	162	1650	L	3	2¼	K	.....	AL	Mar	Don	Novi	P	Pu	Roc...SP	SG	10	6½	1350	SA	2¾	15	5	20	10	Ele	44
11.26	.....	.....	3.52	Bu.4BD182	4-3¾x4½	182	1800	I	3	2½	O	.....	.....	Bos	Uni	Bos	P	Pu	Roc...SP	SG	10	6½	1472	SA	2¾	14	5	20	10	Ele	45
10.70	.....	.....	3.40	Cont...F162	4-3⅛x4⅜	162	1650	L	3	2¼	G	.....	AL	Mar	Don	Novi	P	Pu	Roc...SP	SG	10	6½	1350	SA	2¾	15	5	20	10	Ele	46
9.75	.....	.....	3.06	Bu.4BD153	4-3⅛x4½	153	1800	I	3	2½	O	.....	.....	Bos	Uni	Bos	P	Pu	Roc...SP	SG	10	6½	1472	SA	2¾	14	5	20	10	Ele	47
10.63	.....	.....	3.13	Own..C123	4-3⅛x4	123	1650	I	3	....	G	D,K	Own	CMZ	Don	Own	P	Pu	AR...SP	SG	8⅛	6	1363	WG	3¾	11	5	20	.....	Ele	48
10.00	.....	.....	2.38	Own...C60	4-2⅝x2¾	60	1600	L	3	....	G	.....	Own	Own	Don	Own	P	TS	AR...SP	SG	9	4½	1322	WG	2½	7½	3	2	††⅞	HE	49
10.00	.....	.....	2.88	Own..C113	4-3x4	113	1400	I	3	....	G	D,K	Own	CMZ	Don	Own	P	TS	AR...SP	SG	8⅛	6	1157	WG	3¼	11	5	5	††1½	Ele	50
13.25	.....	.....	3.75	Own..C113	4-3x4	113	1400	I	3	....	G	D,K	Own	CMZ	Don	Own	P	TS	AR...SP	SG	8⅛	6	1157	WG	3¼	11	5	5	††1½	Ele	51
6.63	16.25	.....	3.25	Own..C161	4-3½x4¼	161	1650	I	3	....	G	D,K	Own	Own	Don	Own	P	Pu	Roc...SP	SG	9¾	7½	1019	WG	9½	17½	6	24	.....	Ele	52
6.38	15.38	.....	3.13	Own..C161	4-3½x4¼	161	1650	I	3	....	G	D,K	Own	Own	Don	Own	P	Pu	Roc...SP	CH	9¾	7½	1019	WG	9½	17½	6	24	††3	Ele	53
6.75	16.75	.....	3.63	Own..C261	4-4x5¼	261	1450	I	3	....	G	D,K,LP	Own	Own	Don	Own	P	Pu	Roc...SP	SG	11	7½	899	WG	6¼	21	8	52	.....	Ele	54
6.75	16.75	.....	3.63	Own..D261	4-4x5¼	261	1450	I	5	....	O	.....	Own	Own	Don	Own	P	Pu	Roc...SP	SG	11	7½	899	WG	7	20½	9	52	.....	Ele	55
6.88	16.75	.....	3.63	Own..C264	4-4x5¼	264	1450	I	3	....	G	D,K,LP	Own	Own	Don	Own	P	Pu	Roc...SP	CH	11	7½	899	WG	6¼	21	8	52	††3	Ele	56
6.88	16.88	.....	3.63	Own..D261	4-4x5¼	264	1450	I	5	....	O	.....	Own	Own	Don	Own	P	Pu	Roc...SP	CH	11	7½	899	WG	7	20½	9	52	††3	Ele	57
6.88	15.00	.....	3.63	Own..C161	4-3½x4¼	161	1650	I	3	....	G	D,K	Own	Own	Don	Own	P	Pu	Roc...SP	SG	9¾	7½	1019	WG	4¼	17½	6	24	.....	Ele	58
6.63	16.13	.....	3.50	Own..C261	4-4x5¼	261	1450	I	3	....	G	D,K,LP	Own	Own	Don	Own	P	Pu	Roc...SP	SG	11	7½	899	WG	6½	21	8	52	.....	Ele	59
6.63	16.13	.....	3.50	Own..D261	4-4x5¼	261	1450	I	5	....	O	.....	Own	Own	Don	Own	P	Pu	Roc...SP	SG	11	7½	899	WG	7	20½	9	52	.....	Ele	60
5.50	15.75	.....	2.88	Own..D350	4-4½x5½	350	1500	I	5	....	O	.....	Own	Own	Don	Own	P	Pu	Roc...SP	SG	14	8½	707	CL	9½	35	11	40	.....	Ele	61
5.75	16.75	.....	3.13	Own..D350	4-4½x5½	350	1500	I	5	....	O	.....	Own	Own	Don	Own	P	Pu	Roc...OC	SG	14	8½	707	CL	9½	35	11	40	.....	Ele	62
9.80	.....	.....	2.80	Own....2A	4-3x4	113	1400	I	3	2¼	G	K,D	Own	MS-Z	Don	Own	P	TS	Roc...SP	SG	8⅛	6	1157	FK	3¼	11	5	5	†††½	Ele	63
14.15	20.95	29.15	(c)	Chr Ind...6	6-3¼x4⅜	231	1500	...	4	....	G	.....	AL	Car	.....	Pie	P	Pu	BB....SP	SIG	11	9	Var	FK	4¼	20	6	5½	12½	Ele	64
6.44	13.77	.....	3.25	Own..H277	4-4x5½	277	1350	I	3	2⅞	G	.....	AL	Zen	Don	Own	P	TS	BB....SP	SG	13½	6½	863	WS	5½	23	7	52	**	Ele	65
6.64	14.20	.....	3.35	Own..H277	4-4x5½	277	1350	I	3	2⅞	G	.....	AL	Zen	Don	Own	P	Pu	BB....SP	SG	13½	6½	863	WS	5½	23	7	52	**	Ele	66
5.92	12.65	.....	2.98	Own..H277	4-4x5½	277	1350	I	3	2⅞	G	.....	AL	Zen	Don	Own	P	Pu	BB....SP	SG	13½	6½	863	WS	5½	23	7	48	**	Ele	67
6.25	13.38	.....	3.16	Own..H277	4-4x5½	277	1350	I	3	2⅞	G	.....	AL	Zen	Don	Own	P	Pu	BB....SP	SG	13½	6½	863	WS	5½	23	7	52	**	Ele	68
5.75	12.28	.....	2.89	Own..H260	4-3⅞x5½	260	1350	I	3	2⅞	G	D,LP	AL	Zen	Don	Own	P	Pu	BB....SP	SG	13½	6½	863	WS	5½	19	7	48	**	Ele	69

For Key to References and Abbreviations See Pages 80 and 81

WHEEL TYPE TRACTORS

Line Number	TRACTOR MAKE AND MODEL	GENERAL						DRAW-BAR		OVERALL DIMENSIONS			WHEELS				HP. RATING		Nebraska Test Number	Power Take-off	Number of Forward Speeds	Number of Reverse Speeds	Travel Speeds at Normal Governed Engine R.P.M. (M.P.H.) with Standard Wheels		
		Wheelbase (In.)	Minimum Turning Radius Outside (Ft.)	Ground Clearance (In.)	Shipping Weight with Rubber Tires (Lb.)	TREAD (In.)		Lateral Adjustment (In.)	Height Above Ground (In.)	Length (In.)	Width (In.)	Height—To Highest Point (In.)	Standard Equipment	STEEL Diam. and Face		TIRE SIZE		Belt	Drawbar					First	Second	Third
						Minimum	Maximum							Front (In.)	Rear (In.)	Front (In.)	Rear (In.)									
	Massey-Harris (Cont'd)																									
1	RC-44	87 1/2	9	16 1/4	3908	51 1/4	88 3/8	21 5/16	27 1/2	137	79	82	RT	22x4	54x11 1/2	5.50/16	12/38	39.45	36.85	389	Op	5	1	2.48	3.75	4.98
2	RC-44D	87 1/2	9	16 1/4	3958	51 1/4	88 3/8	21 5/16	27 1/2	137	79	82	RT	22x4	54x11 1/2	5.50/16	12/38	43.04	39.48	426	Op	5	1	2.40	3.63	4.82
3	55	88 1/2	12	12 1/2	6725	57 1/4	57 1/4	23 1/16	28 1/8	145 3/16	72 1/2	83 1/4	RT	30x5 1/8	54x12	7.50/18	14/34	68.20	60.45	455	Op	4	1	2.96	4.22	5.22
4	55D	88 1/2	12	12 1/2	6930	57 1/4	57 1/4	23 1/16	28 1/8	145 3/16	72 1/2	83 1/4	RT	30x5 1/8	54x12	7.50/18	14/34	60.27	54.49	452	Op	4	1	2.96	4.22	5.22
5	Std. 21	76	11 3/4	12 1/8	2450	52	52	18 1/4	7	122 1/2	70 5/8	56 1/2	RT	.....	.....	5.00/15	10/28	27.00	20.50	....	Op	4	1	2.45	3.51	4.61
6	RT21	82 3/4	11 3/4	12 1/4	2525	52	88▲	18 1/4	6 1/4	123 3/8	91 3/4	59 7/8	RT	.....	.....	4.00/15	10/28	27.00	20.50	....	Op	4	1	2.45	3.51	4.61
7	RS21	82 3/4	11 3/4	12 1/4	2525	52	88▲	18 1/4	6 1/4	123	91 3/4	58 1/8	RT	.....	.....	6.00/12	10/28	27.00	20.50	....	Op	4	1	2.45	3.51	4.61
8	HA21	87	11 3/4	12 1/4	2525	52	88▲	18 1/4	6 5/8	126 1/2	91 3/4	59 1/8	RT	.....	.....	4.00/15	10/28	27.00	20.50	....	Op	4	1	2.45	3.51	4.61
9	Std. 23	75 3/4	NA	12 1/4	2490	52	52	18 1/4	8 7/16	121	70 7/8	56 1/2	RT	.....	.....	5.00/15	11/28	31.59	23.91	....	Op	4	1	2.55	3.66	4.81
10	RT23	82 1/2	NA	13 1/8	2565	52	88▲	18 1/4	7 1/2	122 1/2	93 1/4	60 1/8	RT	.....	.....	4.00/15	11/28	31.59	23.91	....	Op	4	1	2.55	3.66	4.81
11	RS23	82 1/2	NA	13 1/8	2665	52	88▲	18 1/4	7 1/2	123 3/8	93 1/4	58 5/8	RT	.....	.....	6.00/12	11/28	31.59	23.91	....	Op	4	1	2.55	3.66	4.81
12	HA33	87	NA	13 1/8	2565	52	88▲	18 1/4	7 1/2	128	93 1/4	60 1/8	RT	.....	.....	4.00/15	11/28	31.59	23.91	....	Op	4	1	2.55	3.66	4.81
13	Std. 33	79 5/8	11	11	3445	52 3/8	52 3/8	21 1/16	8 1/4	129	66 3/4	75	RT	28x4 1/2	48x12	5.50/16	12/28	38.00	33.00	....	Op	5	1	2.27	3.17	3.96
14	RT33	88 1/8	9	15 1/16	3950	52 3/4	88 5/8	21 5/16	12 1/16	137	147 1/2	80 3/8	RT	22x4	54x11 1/2	5.50/16	12/28	38.00	33.00	....	Op	5	1	2.75	3.84	4.80
15	RS33	88 7/8	9	15 1/2	3950	52 3/4	88 5/8	21 5/16	11 1/16	149	147 1/2	80 3/4	RT	.....	.....	9.00/10	12/28	38.00	33.00	....	Op	5	1	2.75	3.84	4.80
16	HA33	100 5/8	13 1/2	15 1/16	3845	52 3/4	88 3/8	21 1/16	11 1/8	137	147 1/2	80 1/2	RT	28x4 1/2	54x11 1/2	5.50/16	12/38	38.00	33.00	....	Op	5	1	2.75	3.84	4.80
17	Mercor 30-BD	87	8	23	3450	56	84	18	12	132	75	60	RT	.....	.....	5.50/16	11/38	30.0	27.0	N	St	4	1	2.70	4.20	5.90
18	35-BD	87	8	23	3650	56	84	18	12	132	75	60	RT	.....	.....	5.50/16	11/38	35.0	31.0	N	St	4	1	2.70	4.20	5.90
	Minneapolis-Moline																									
19	R	69	10	11	3110	47 1/2F	88	15 1/16	15	108 1/2	81 1/16	68 1/2	RT	.....	.....	5.00/15	10/34	27.89	24.00	NT	Op	4	1	2.60	3.60	4.70
20	Industrial R	66 1/2	12	11 1/2	3650	47 1/4F	.....	N	16	104	59	63 1/2	RT	.....	.....	7.50/16	12.00/24	25.00	21.00	NT	Op	4	1	2.20	3.20	4.10
21	U	80	12	16	5300	50 1/2F	62 1/2	22	14 1/16	130 3/4	71	72	RT	.....	.....	6.00/16	12/38	50.00	45.00	NT	Op	5	1	2.70	3.90	4.50
22	G	82 1/2	14	14	6400	54 1/4F	62R	25	15 1/8	135 1/8	80	71	RT	.....	.....	7.50/18	14/34	59.50	51.87	437	Op	5	1	2.60	3.60	4.10
23	G Diesel	96 1/8	16 1/2	14	7200	62	.....	25	15 1/8	149 3/8	80	71	RT	.....	.....	7.50/18	14/34	60.00	52.00	NT	Op	5	1	2.70	3.80	4.50
24	Z	72 1/16	12	12 1/4	3750	48F	54	11 1/4	14 1/4	120 11/16	66	69	RT	.....	.....	5.50/16	11/38	37.48	33.36	NT	Op	5	1	2.40	3.60	4.60
25	U Diesel	80	12	16	5500	57	62 1/2	22	14 1/16	130 3/4	71	72	RT	.....	.....	6.00/16	12/38	42.00	37.00	NT	....	5	1	2.70	3.90	4.50
26	UB Diesel	88	8 1/2	25	5500	54 1/2	84 1/2	22	(j)	133	83	78 1/8	RT	.....	.....	6.00/16	12/38	42.00	37.00	NT	Op	5	1	2.70	3.90	4.50
27	Industrial UTIL	87 11/16	17	17 1/2	6300	66 1/2	70 1/2	N	20 3/4	135 3/4	84 1/2	74 5/8	RT	.....	.....	8.25/20	14.00/28	50.00	45.00	NT	Op	5	••	2.40	3.50	4.00
28	Industrial UTI	79 1/2	16	17 1/2	6300	66 1/2	70 1/2	N	20 3/4	127 5/8	77	73 1/2	RT	.....	.....	8.25/20	14.00/28	50.00	45.00	NT	Op	5	1	2.40	3.50	4.00
29	BF	79	7 3/8	26	2730	52	76	19	15 1/2	115 1/2	63	75 1/2	RT	.....	.....	5.00/15	10/28	2.70	2.50	469	Op	4	1	2.40	3.70	5.20
30	UB	88	8 1/2	25	5300	54 1/2	84 1/2	22	(j)	133	83	78 1/16	RT	.....	.....	6.00/16	12/38	50.00	45.00	NT	Op	5	1	2.70	3.90	4.50
31	BG	74	9	20 1/2	2880	40	68	20	.....	110	55 1/4	75	RT	.....	.....	5.00/15	11/24	27.00	25.00	NT	Op	4	1	2.30	3.50	4.90
32	UB Type E	96	8 1/2	20	5500	54 1/2	84 1/2	22	(j)	141	83	78 1/16	RT	.....	.....	6.00/16	12/38	42.00	37.00	NT	Op	5	1	2.70	3.90	4.50
33	UB Type N	88	8 1/2	25	5500	54 1/2	96	22	(j)	133	94 1/2	78 1/16	RT	.....	.....	6.00/16	12/38	42.00	37.00	NT	Op	5	1	2.70	3.90	4.50
34	ZB	82	8	25	3700	54	88	18 3/4	14 3/4	126 1/4	83	74	RT	.....	.....	5.50/16	11/38	37.48	33.36	NT	Op	5	1	2.40	3.60	4.60
35	ZB Type E	90 1/8	8	19 7/8	3700	54	88	18 3/4	14 3/4	134 3/8	83	74	RT	.....	.....	5.50/16	11/38	37.48	33.36	NT	Op	5	1	2.40	3.60	4.60
36	ZB Type N	82 3/8	8	19 7/8	3700	54	96	18 3/4	14 3/4	124 3/4	91	74	RT	.....	.....	5.50/16	11/38	37.48	33.36	NT	Op	5	1	2.40	3.60	4.60
37	Oliver Rowcrop 66HC	86 11/16	8 3/4	18 1/16	2548	60	88	20 1/2	17	134 7/16	80 1/4	73 1/4•	RT	.....	55x11 1/2	5.00/15	9/38	26.05	22.30	412	Op	6	2	2.46	3.25	4.28
38	Standard 66HC	73 5/8	10	11 3/4	2492	50 3/4	58 3/4	20 1/2	13 1/2	123 7/8	61 5/8	66 7/8•	RT	.....	.....	5.00/15	10/24	26.21	22.61	413	Op	6	2	2.50	3.30	4.32
39	66 Ind.	73 5/8	10	11 3/4	2462	50 3/4	58 3/4	20 1/2	13 1/2	123 7/8	61 5/8	66 7/8•	RT	.....	.....	6.00/16	10/24	.....	.....	NT	Op	6	2	1.88	2.48	3.28
40	Rowcrop 77HC	90 11/16	9 1/4	18 1/16	3623	60	92 1/2	20 5/8	15 1/16	139 1/4	80 1/4	75•	RT	.....	55x11 1/2	5.50/16	11/38	38.82	34.20	425	Op	6	2	2.45	3.22	4.27
41	Standard 77HC	78 1/4	10 3/4	12 1/16	3464	.....	52 1/2	20 5/8	14 1/16	129 1/16	65 3/4	69 1/2•	RT	.....	.....	5.50/16	12/26	38.82	34.20	425	Op	6	2	2.48	3.27	4.33
42	77 Ind.	81 3/4	12 1/2	12 1/16	4550	52 1/2	69 1/2	20 5/8	12 1/2	133 7/8	78 5/8	70•	RT	.....	.....	7.00/20	12.00/24	.....	.....	NT	Op	6	2	1.95	2.59	3.44
43	Standard 88HC	79 1/4	11	13	4392	54	62	20 1/2	13 1/4	133 11/16	68 1/2	69 1/8	RT	.....	44x10	6.00/16	13/26	44.96	38.56	391	Op	6	2	2.48	3.22	4.27
44	Rowcrop 88HC	93 11/16	9 3/4	18 1/2	4598	60	92 1/2	20 5/8	13 7/8	143 1/8	80 1/4	75	RT	.....	55x11 1/2	6.00/16	12/38	44.66	38.40	388	Op	6	2	2.49	3.22	4.28
45	88 Ind.	82 11/16	12 1/2	12 1/2	4860	54	71	20 1/2	14 3/8	136	81 1/2	70 3/4•	RT	.....	.....	7.00/20	13.00/24	.....	.....	NT	Op	6	2	2.00	2.59	3.44
46	Rowcrop 88D	93 11/16	9 3/4	18 1/2	4813	60	92 1/2	20 5/8	13 7/8	143 1/8	80 1/4	75•	RT	.....	55x11 1/2	6.00/16	12/38	45.15	39.07	450	Op	6	2	2.49	3.22	4.28
47	Standard 88D	79 1/4	11	13	4807	54	62	20 1/2	12 1/2	133 11/16	68 1/2	69 1/8•	RT	.....	44x10	6.00/16	13/36	45.15	39.07	450	Op	6	2	2.48	3.22	4.27
48	Ind. 88D	81 3/4	12 1/2	12 1/2	5009	54	71	20 1/2	14 3/8	136	81 1/2	70 3/4•	RT	.....	.....	7.00/20	13/24	.....	.....	NT	Op	6	2	2.00	2.59	3.44
49	Rowcrop 77D	90 1/16	9 1/4	18 1/16	3811	60	92 1/2	20 5/8	15 1/16	139 1/4	80 1/4	75	RT	.....	55x11 1/2	5.50/16	11/38	37.17	33.09	457	Op	6	2	2.45	3.22	4.27
50	Standard 77D	78 1/4	10 3/4	12 1/16	3652	52 1/2	52 1/2	20 5/8	14 1/16	129 5/8	65 3/4	69 1/8•	RT	.....	.....	5.50/16	12/26	37.17	33.09	457	Op	6	2	2.48	3.27	4.33
51	Ind. 77D	82 1/16	12 1/2	12 1/16	4738	52 1/2	69 1/2	20 5/8	13 1/4	133 7/8	78 5/8	70•	RT	.....	.....	7.00/20	12/24	.....	.....	NT	Op	6	2	1.95	2.59	3.44
52	Rowcrop 66D	86 11/16	8 3/4	18 1/16	2675	60	88	20 1/2	17	134 7/16	80 1/4	73 1/4•	RT	.....	.....	5.00/15	9/38	26.39	23.14	467	Op	6	2	2.50	3.30	4.32
53	Standard 66D	73 5/8	10	11 3/4	2616	50 3/4	58 3/4	20 1/2	13 1/2	123 7/8	61 5/8	67 1/8•	RT	.....	.....	5.00/15	10/24	26.39	23.14	467	Op	6	2	2.50	3.30	4.32
54	Ind. 66D	73 5/8	10	11 3/4	2585	50 3/4	58 3/4	20 1/2	13 1/2	123 7/8	61 5/8	67 1/8•	RT	.....	.....	6.00/16	10/24	.....	.....	NT	Op	6	2	1.88	2.48	3.25
55	99D	85	16	12	7000	57 1/2	.....	18 1/2	(k)	139 1/4	74	72 3/4•	RT	.....	.....	7.50/18	14/30	.....	.....	NT	Op	4	1	2.60	3.84	5.05
56	99HC	85	16	12	7000	57 1/2	.....	18 1/2	(k)	139 1/4	74	72 3/4•	RT	.....	.....	7.50/18	14/30	.....	.....	NT	Op	4	1	2.60	3.84	5.05
57	Sheppard SD-2	85	7 1/2	25	4608	56	84	23	.....	125	Ad	70 1/4	RT	.....	.....	6.00/16	11/38	.....	.....	NT	Op	8	2	1.85	2.67	3.14
58	SD-3	92	8	25	4708	56	84	23	.....	131	Ad	70 1/4	RT	.....	.....	6.00/16	11/38	.....	.....	NT	Op	8	2	1.85	2.67	3.14
59	SD-4	91 1/2	8 3/4	26	6000	56	84	22 1/2	18 1/4	138 1/4	74	83 1/2	RT	.....	.....	6.00/16	13/36	.....	.....	NT	Op	10	2	1.69	2.60	2.81
60	Tiger PTD 5	46	8	13	518	26	40	N	13	64	26	35	RT	8	12	4.00/8	5.00/12	5.10	4.50	....	St	1	1	8.00	.....	.....
61	8	46	9	15	590	26	40	N	15	66	26	37	RT	8	16	4.00/8	6.00/16	5.10	6.80	....	St	1	1	8.00	.....	.....

ABBREVIATIONS

▲—With hub extension; 80" without.
‡—Total capacity, final drive cases.
‡—Clearance at front axle.
††—Capacity final drive, each case.
▼—Minimum.
■—Rated using gasoline.
▲—At top of hood.
••—Included in transmission.
••—With reversing transmission and 6 reverse speeds, from a low reverse of 1.8 and 5 other reverse speeds from 2.3 to 12.0 M.P.H.
●—To top of steering wheel.
•—In listed order: 2.56-4.42; 2.60-4.50; 1.96-3.38; 2.58-4.50; 2.61-4.57; 2.08-3.57; 2.54-4.36; 2.55-4.38; 2.05-3.53; 2.55-4.38; 2.54-4.36; 2.05-3.53; 2.58-4.50; 2.61-4.57; 2.08-3.57; 2.56-4.52; 2.60-4.50; 1.96-3.38.
‡‡—7 4/16 in. to 98 in.
▼—6.27 in 6th, 7.33 in 7th, road speed in 8th.
▼▼—5.20 in 6th, 6.10 in 7th, 10.50 in 8th, 1.98 in low reverse, 2.28 in high reverse.
▼▼—5.24 in 6th, 6.15 in 7th, road speed in 8th, 1.98 in low reverse, 3.28 in high reverse.
(a)—2=, 2—, 2%.
(b)—Roller bearing.
(c)—Low reverse, 3.00; high reverse, 4.20.
(d)—Low reverse, 2.31; high reverse 3.91.
(e)—Reverse 2.12 and 2nd speed 5.00.
(f)—Transmission driven, standard; engine driven, optional.
(g)—Hand clutch, Rockford; foot clutch Borg & Beck.
(h)—3 in. rear, front S.A.E. 212 roller, center 2.75.
(i)—Gasoline, 3; distillate, 3 1/4.
(j)—15 3/8 and 16 1/16.
(k)—12 to 20.
(l)—4.29 in 6th, 4.90 in 7th, 6.40 in 8th, 9.91 in 9th, 16.00 in 10th, 1.62 in low reverse and 2.51 in high reverse.

A—Air.
AC—A.C. Spark Plug Co.
Ad—Adjustable.
AL—Electric Auto-Lite Co.
AR—Auburn or Rockford.
Au—Auburn Clutch Co.
BB—Borg & Beck Div.
Bos—American Bosch Corp.
Br—Briggs & Stratton Corp.
BS—Bendix-Scintilla Magneto Div.
Bu—Buda.
Car—Carter Carburetor Corp.
CH—Chain.
Chr—Chrysler Corp.
CL—Cam and Lever.
CMZ—Carter, Marvel-Schebler or Zenith.
Cont—Continental Motors Corp.

WHEEL TYPE TRACTORS

Travel Speeds at Normal Governed Engine R.P.M. with Standard Wheels				ENGINE							FUEL										BELT PULLEY				CAPACITIES						
Fourth	Fifth	Sixth	Reverse	Make and Model	Number of Cylinders—Bore and Stroke (In.)	Piston Disp. (Cu. In.)	R.P.M. at Governed Speed	Valve Arrangement	Number of Main Bearings	Diameter of Main Bearings	Standard	Optional	Ignition—Make	Carburetor or Injector Pump—Make	Air Cleaner—Make	Governor—Make	Oiling System—Type	Cooling System—Type	Clutch—Make and Type	Final Drive—Type	Diameter (In.)	Face (In.)	Normal R.P.M.	Steering Type	Cooling System (Gal.)	Fuel Tank (Gal.)	Crankcase (Qts.)	Transmission (Qts.)	Final Drive Case (Qts.)	Starting Method	Line Number
6.47	13.80	.....	3.26	Own..H260	4-3 7/8x5 1/2	260	1350	I	3	2 7/8	G	D,LP	AL	Zen	Don	Own	P	Pu	BB....SP	SG	13 1/2	6 1/2	863	WS	5 3/4	23	7	52	**	Ele	1
6.27	13.37	.....	3.16	OwnHD260	4-3 7/8x5 1/2	260	1350	I	3	2 7/8	O	.....	Bos	Don	Bos	P	Pu	BB....SP	SG	13 1/2	6 1/2	863	WS	5 3/4	23	7	52	**	Ele	2
12.07	.....	.....	2.54	Own...382	4-4 1/2x6	382	1350	I	3	3 1/4	G	D,LP	AL	Zen	Don	Own	P	Pu	(g)....SP	SG	16	8 1/2	730	CL	7	27 1/2	9	68	**	Ele	3
12.07	.....	.....	2.54	Own JD382	4-4 1/2x6	382	1350	I	3	3 1/4	O	.....	Bos	Don	Bos	P	Pu	BB....SP	SG	16	8 1/2	730	CL	7	27 1/2	9	68	**	Ele	4
12.99	.....	.....	2.45	Cont...F124	4-3x4 3/8	124	1500	L	3	2 1/4	G	.....	AL	Mar	Don	Novi	P	Pu	BB....SP	SG	9 1/2	6 1/4	....	WS	3	13	5	8	13 1/2	Ele	5
12.99	.....	.....	2.45	Cont...F124	4-3x4 3/8	124	1500	L	3	2 1/4	G	.....	AL	Mar	Don	Novi	P	Pu	BB....SP	SG	9 1/2	6 1/4	....	WS	3	13	5	8	13 1/2	Ele	6
12.99	.....	.....	2.45	Cont...F124	4-3x4 3/8	124	1500	L	3	2 1/4	G	.....	AL	Mar	Don	Novi	P	Pu	BB....SP	SG	9 1/2	6 1/4	....	WS	3	13	5	8	13 1/2	Ele	7
12.99	.....	.....	2.45	Cont...F124	4-3x4 3/8	124	1500	L	3	2 1/4	G	.....	AL	Mar	Don	Novi	P	Pu	BB....SP	SG	9 1/2	6 1/4	....	WS	3	13	5	8	13 1/2	Ele	8
13.54	.....	.....	2.55	Cont...F140	4-3 1/8x4 3/8	140	1500	L	3	2 1/4	G,K	.....	AL	Mar	Don	Novi	P	Pu	BB....SP	SG	9 1/2	6 1/2	1020	WS	(i)	13	5	8	13 1/2	Ele	9
13.54	.....	.....	2.55	Cont...F140	4-3 1/8x4 3/8	140	1500	L	3	2 1/4	G,K	.....	AL	Mar	Don	Novi	P	Pu	BB....SP	SG	9 1/2	6 1/2	1020	WS	(i)	13	5	8	13 1/2	Ele	10
13.54	.....	.....	2.55	Cont...F140	4-3 1/8x4 3/8	140	1500	L	3	2 1/4	G,K	.....	AL	Mar	Don	Novi	P	Pu	BB....SP	SG	9 1/2	6 1/2	1020	WS	(i)	13	5	8	13 1/2	Ele	11
13.54	.....	.....	2.55	Cont...F140	4-3 1/8x4 3/8	140	1500	L	3	2 1/4	G,K	.....	AL	Mar	Don	Novi	P	Pu	BB....SP	SG	9 1/2	6 1/2	1020	WS	(i)	13	5	8	13 1/2	Ele	12
5.55	11.11	.....	2.57	Own...E201	4-3 5/8x4 7/8	201	1500	I	3	2 5/8	G	.....	AL	Mar	Don	Own	P	Pu	BB....SP	SG	9 1/2	6 1/4	890	WS	4 1/2	19	6	48	**	Ele	13
6.72	13.46	.....	3.11	Own...E201	4-3 5/8x4 7/8	201	1500	I	3	2 5/8	G	.....	AL	Mar	Don	Own	P	Pu	BB....SP	SG	9 1/2	6 1/4	890	WS	4 1/2	19	6	52	**	Ele	14
6.72	13.46	.....	3.11	Own...E201	4-3 5/8x4 7/8	201	1500	I	3	2 5/8	G	.....	AL	Mar	Don	Own	P	Pu	BB....SP	SG	9 1/2	6 1/4	890	WS	4 1/2	19	6	52	**	Ele	15
6.72	13.46	.....	3.11	Own...E201	4-3 5/8x4 7/8	201	1500	I	3	2 5/8	G	.....	AL	Mar	Don	Own	P	Pu	BB....SP	SG	9 1/2	6 1/4	890	WS	4 1/2	19	6	52	**	Ele	16
11.90	.....	.....	3.50	Bu 4BD153	4-3 1/16x4 1/8	153	1800	I	3	2 1/4	O	N	N	Bos	Don	Bos	P	Pu	BB....SP	....	8 1/4	6 1/2	1458/8	SA	3 1/2	15	5	20	**	Ele	17
11.90	.....	.....	3.50	Bu 4BD182	4-3 11/16x4 1/8	182	1800	I	3	2 1/4	O	N	N	Bos	Don	Bos	P	Pu	BB....SP	....	8 1/4	6 1/2	1458/8	SA	3 1/2	15	5	20	**	Ele	18
13.20	.....	.....	2.90	Own...EE	4-3 5/8x4	165	1500	Ih	2	3	G	D	DR	Mar	Uni	Own	P	Pu	TD....SP	SG	12 1/4	6	1 000	FK	3 5/8	14	7	18	**	HE	19
11.50	.....	.....	2.50	Own...EE	4-3 5/8x4	165	1500	Ih	2	3	G	D	DR	Mar	Uni	Own	P	Pu	Roc....SP	SG	12 1/4	6	1 000	FK	3 5/8	14	7	18	**	HE	20
6.58	15.10	.....	2.10	Own..283B	4-4 1/8x5	283	1300	I	3	2 3/8	G	D,LP	DR	Mar	Uni	Own	P	Pu	TD....SP	SG	16	7	727	FK	6	21 1/2	9	52	**	HE	21
6.09	13.80	.....	2.00	Own..403C	4-4 5/8x6	403	1100	I	3	2 3/8	G	D,LP	DR	Mar	Don	Own	P	Pu	TD....SP	SG	16	7	627	FK	12	29	9	52	**	HE	22
6.50	15.80	.....	2.10	Own..D425	6-4 1/4x5	426	1300	I	4	2 3/8	O	.....	Bos	.....	Don	Bos	P	Pu	TD....SP	SG	18	7	741	FK	12	29	14	52	**	Ele	23
6.30	13.10	.....	2.20	Own..206G	4-3 5/8x5	204	1500	Ih	3	(h)	G	D,LP	DR	Mar	Don	Own	P	Pu	TD....SP	SG	15 1/4	7	786	FK	3 3/4	19	7	28	**	HE	24
6.50	15.10	.....	2.10	Own..D283	4-4 1/4x5	284	1300	I	3	2 3/8	O	.....	Bos	.....	Don	Bos	P	Pu	TD....SP	SG	16	7	741	FK	6	21 1/2	9	52	**	Ele	25
6.50	15.10	.....	2.10	Own..D283	4-4 1/4x5	284	1300	I	3	2 3/8	O	.....	Bos	.....	Don	Bos	P	Pu	Roc....SP	SG	16	7	741	SA	6	21 1/2	9	52	**	Ele	26
5.80	13.50	.....	1.90	Own..283B	4-4 1/4x5	283	1300	I	3	2 3/8	G	D	DR	Mar	Uni	Own	P	Pu	Roc....SP	SG	16	7	741	FK	6	21 1/2	9	52	**	HE	27
5.80	13.50	.....	1.90	Own..283B	4-4 1/4x5	283	1300	I	3	2 3/8	G	D	DR	Mar	Uni	Own	P	Pu	Roc....SP	SG	16	7	741	FK	6	21 1/2	9	52	**	HE	28
13.00	.....	.....	2.80	He 1XB3SL	4-3 1/2x4	133	1800	L	3	2	G	K	DR	Mar	Vor	Novi	P	Pu	Roc....SP	SG	10	6 1/2	1160	WG	2 5/8	12	5	9	3	Ele	29
6.50	15.10	.....	2.10	Own..283B	4-4 1/4x5	283	1300	I	3	2 3/8	G	D,LP	DR	Mar	Uni	Own	P	Pu	Roc....SP	SG	16	7	741	SA	6	21 1/2	9	52	**	Ele	30
12.50	.....	.....	2.70	He 1XB3SL	4-3 1/2x4	133	1800	L	3	2	G	K	DR	Mar	Vor	Novi	P	Pu	Roc....SP	SG	10	6 1/2	1160	SA	6	21	9	52	**	Ele	31
6.50	15.10	.....	2.10	Own..D283	4-4 1/4x5	284	1300	I	3	2 3/8	O	.....	Bos	.....	Don	Bos	P	Pu	Roc....SP	SG	16	7	741	FK	6	21 1/2	9	52	**	Ele	32
6.50	15.10	.....	2.10	Own..D283	4-4 1/4x5	284	1300	I	3	2 3/8	O	.....	Bos	.....	Don	Bos	P	Pu	Roc....SP	SG	16	7	741	SA	6	21 1/2	9	52	**	Ele	33
6.30	13.10	.....	2.20	Own..206G	4-3 5/8x5	207	1500	Ih	3	(h)	G	D,LP	DR	Mar	Don	Own	P	Pu	Roc....SP	SG	15 1/4	7	786	SA	3 3/4	19	7	28	**	Ele	34
6.30	13.10	.....	2.20	Own..206G	4-3 5/8x5	207	1500	Ih	3	(h)	G	D,LP	DR	Mar	Don	Own	P	Pu	Roc....SP	SG	15 1/4	7	786	FK	3 3/4	19	7	28	**	Ele	35
6.30	13.10	.....	2.20	Own..206G	4-3 5/8x5	207	1500	Ih	3	(h)	G	D,LP	DR	Mar	Don	Own	P	Pu	Roc....SP	SG	15 1/4	7	786	SA	3 3/4	19	7	28	**	Ele	36
5.60	6.61	11.42	*	Own.....	4-3 1/8x3 3/4	129	1600	I	3	2 1/4	G	.....	DR	Mar	Don	Own	PS	Pu	BB....SP	SG	11 7/8	7 1/4	987	SA	3	10	4	18	**	Ele	37
5.70	6.72	11.60	*	Own.....	4-3 1/8x3 3/4	129	1600	I	3	2 1/4	G	.....	DR	Mar	Don	Own	PS	Pu	BB....SP	SG	11 7/8	7 1/4	987	FK	3	10	4	18	**	Ele	38
4.28	8.46	14.60	*	Own.....	4-3 1/8x3 3/4	129	1600	I	3	2 1/4	G	.....	DR	Mar	Don	Own	PS	Pu	BB....SP	SG	11 7/8	7 1/4	987	FK	3	10	4	18	**	Ele	39
5.62	6.58	11.47	*	Own.....	6-3 1/8x3 3/4	194	1600	I	4	2 1/4	G	.....	DR	Mar	Don	Own	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	SA	4 1/8	16 1/2	5	18	**	Ele	40
5.70	6.68	11.65	*	Own.....	6-3 1/8x3 3/4	194	1600	I	4	2 1/4	G	.....	DR	Mar	Don	Own	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	FK	4 1/2	16 1/2	5	18	**	Ele	41
4.52	9.06	15.80	*	Own.....	6-3 1/8x3 3/4	194	1600	I	4	2 1/4	G	.....	DR	Mar	Don	Own	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	FK	4 1/2	16 1/2	5	18	**	Ele	42
5.53	6.80	11.70	*	Own.....	6-3 1/2x4	231	1600	I	4	2 5/8	G	.....	DR	Mar	Don	Own	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	SA	4 1/2	20	6	18	**	Ele	43
5.53	6.82	11.75	*	Own.....	6-3 1/2x4	231	1600	I	4	2 5/8	G	.....	DR	Mar	Don	Own	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	SA	4 1/2	20	6	18	**	Ele	44
4.46	9.27	15.95	*	Own.....	6-3 1/2x4	231	1600	I	4	2 5/8	G	.....	DR	Mar	Don	Own	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	FK	4 1/2	20	6	18	**	Ele	45
5.53	6.82	11.75	*	Own....88	6-3 1/2x4	231	1600	I	4	2 5/8	O	.....	Bos	Don	Bos	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	SA	4 1/2	19	6	18	**	Ele	46
5.53	6.80	11.75	*	Own....88	6-3 1/2x4	231	1600	I	4	2 5/8	O	.....	Bos	Don	Bos	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	FK	4 1/2	19	6	18	**	Ele	47
4.46	9.27	15.95	*	Own....88	6-3 1/2x4	231	1600	I	4	2 5/8	O	.....	Bos	Don	Bos	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	FK	4 1/2	19	6	18	**	Ele	48
5.62	6.58	11.47	*	Own....77	6-3 1/8x3 3/4	194	1600	I	4	2 1/4	O	.....	Bos	Don	Bos	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	SA	4 1/8	16 1/2	5	18	**	Ele	49
5.70	6.68	11.65	*	Own....77	6-3 1/8x3 3/4	194	1600	I	4	2 1/4	O	.....	Bos	Don	Bos	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	FK	4 1/2	16 1/2	5	18	**	Ele	50
4.52	9.06	15.80	*	Own....77	6-3 1/8x3 3/4	194	1600	I	4	2 1/4	O	.....	Bos	Don	Bos	PS	Pu	BB....SP	SG	11 7/8	7 1/4	992	FK	4 1/8	16 1/2	5	18	**	Ele	51
5.70	6.72	11.60	*	Own....66	4-3 1/8x3 3/4	129	1600	I	3	2 1/4	O	.....	Bos	Don	Bos	PS	Pu	BB....SP	SG	11 7/8	7 1/4	987	SA	3	10	4	18	**	Ele	52
5.70	6.72	11.60	*	Own....66	4-3 1/8x3 3/4	129	1600	I	3	2 1/4	O	.....	Bos	Don	Bos	PS	Pu	BB....SP	SG	11 7/8	7 1/4	987	FK	3	10	4	18	**	Ele	53
4.28	8.46	14.60	*	Own....66	4-3 1/8x3 3/4	129	1600	I	3	2 1/4	O	.....	Bos	Don	Bos	PS	Pu	BB....SP	SG	11 7/8	7 1/4	987	FK	3	10	4	18	**	Ele	54
13.60	.....	.....	3.79	Own...99D	6-4x4	302	1675	I	4	2 5/8	O	.....	Bos	Don	Bos	P	Pu	BB....SP	SG	13 1/2	8 1/4	887	FK	5 1/4	30	6	48	**	Ele	55
13.60	.....	.....	3.79	Own 99HO	6-4x4	302	1675	I	4	2 5/8	G	.....	DR	Mar	Don	Own	P	Pu	BB....SP	SG	13 1/2	8 1/4	887	FK	5 1/4	30	6	48	**	Ele	56
3.72	4.53	▼	(d)	Own...13E	2-4 1/4x5	126	1650	I	3	2 3/4	O	.....	Own	.....	Don	Own	P	Pu	Roc...SP	SG	8 1/4	7 1/2	1350	....	7	15	12	25	**	Ele	57
3.72	4.53	▼	(d)	Own....6E	3-4 1/4x5	189	1650	I	4	2 3/4	O	.....	Own	.....	Don	Own	P	Pu	Roc...SP	SG	8 1/4	7 1/2	1350	....	7 1/2	15	13	25	**	Ele	58
3.28	3.88	(1)	(1)	Own....18	4-4 1/4x5	319	1650	I	5	3 1/16	O	.....	Own	.....	Don	Own	P	Pu	Roc...SP	SG	10	7 7/16	1150	....	7 1/2	22	10	32	**	Ele	59
.....	.....	.....	8.00	Br.....14	1-2 1/4x2 3/4	14	3200	L	...	....	G	.....	Br	Br	Unl	Br	PS	A	TD...MD	SGC	.....	.....	.....	SA	....	1	1/2	1	1	HC	60
.....	.....	.....	5.00	Br.....23	1-3x3	19	3300	L	...	....	G	.....	Br	Br	Unl	Br	PS	A	TD...MD	SGC	.....	.....	.....	SA	....	1 1/2	1/2	1	1	HC	61

CZ—Carter or Zenith.
D—Distillate.
DA—Divided Axle.
DFS—Divided axle, front axle knuckle or solid axle.
DO—Double plate operating in oil.
Don—Donaldson Co.
DR—Delco-Remy Div.
D-V—Donaldson or Vortex.
Ele—Electric starting.
F—Front wheel tread.
FK—Front axle knuckle.
FM—Fairbanks Morse & Co.
FO—Fork type.
G—Gasoline.
Han—Handy Governor Corp.
HC—Hand crank.
He—Hercules Motor Corp.
HE—Hand or Electric.
Hel—Helical gear.
HH—Houde-Hershey.
Hol—Holley Carburetor Co.
I—In head (Valves).
IG—Internal gear.
Ih—Horizontal—In head (Valves).
K—Kerosene.
L—"L" head (Valves).
Le—Le Roi Co.
Lo—Long Mfg. Co.
LP—Liquid petroleum gas.
Mar—Marvel-Schebler Carburetor Div.
MD—Multiple disc, operating dry.
MS-Z—Marvel-Schebler or Zenith.
M-Z—Marvel or Zenith.
N—No or none.
NA—Not available.
Novi—Novi Equipment Co.
NS—Non-circulating splash.
NT—Not tested.
O—Diesel fuel.
OC—Over center, single plate.
Op—Optional.
P—Pressure.
Pie—Pierce Governor Co.
Piv—Pivot.
PS—Pressure and splash. Pu—Pump.
R—Rear wheel tread.
Roc—Rockford Drilling Machine Div.
RLA—Rockford, Long or Auburn.
RT—Rubber tires.
S—Splash.
SA—Solid axle.
SB—Spiral bevel gear.
SF—Solid axle or front axle knuckle.
SG—Spur gear.
SGC—Spur gear and chain.
SIG—Internal spur gear.
SP—Single plate, dry. St—Standard.
TD—Twin Disc Clutch Co.
TS—Therme-syphon.
Unl—United Air Cleaner Div.
Var—Various.
Vor—Vortex Mfg. Co.
Wico—Wico Electric Co.
WG—Worm gear.
Wis—Wisconsin Motor Corp.
WS—Worm and sector.
Zen—Zenith Carburetor Div.

FOREIGN CARS

MAKE AND MODEL	ENGINE								GENERAL DATA												REAR AXLE					
										TREAD		OVERALL DIMENSIONS (In.)														
	Number of Cylinders, Bore and Stroke (In.)	Maximum Brake Hp. at Specified R.P.M.	Piston Displacement (Cu In.)	Compression Ratio (To -1)	Cylinder Arrangement	Valve Location	Piston Material	Camshaft Drive	Wheelbase (In.)	Front (In.)	Rear (In.)	Length Including Bumpers and Bumper Guards	Width	Height—Road to Roof, No Load	Tires (In.)	Oil Pressure to—	Carburetors—No. Used and Type	Cooling System	Shifting Method	No. of Forward Speeds	Final Drive Type	Gear Ratio (To -1)	Torque Taken By	Independent Suspension	Service Brakes	Shipping Weight (Lbs.)
A.C. Ace	6-2.56x3.94	85-4500	121.5	7.50	IL	I	AA	Ch	90.0	50.0	50.0	149.0	59.0	49.0	5.50/16	abc	3-Su	Pu	HS	4	Hy	3.64	Sp	FR	H	1685
2 Litre	6-2.56-3.94	76-4500	121.5	6.75	IL	I	AA	Ch	114.0	55.0	56.0	184.0	67.0	61.0	6.70/16	abce	3-Su	Pu	HS	4	Hy	4.55	Sp	N	H	
Allard J2X	8-3.19x3.75	140-4000	238.5	7.00	V	I	AA	HG	100.0	56.0	52.0	148.0	63.0	34.0	6.00/16	abc	2-Do	TP	HS	3	SB	3.27	TT	Fr	H	2016
21C	4-3.12x3.00	47-4400	92.0	6.80	IL	I	AA	HG	100.0	51.0	50.0	156.0	58.0	51.0	6.40/13	abc	1-DD	TP	HS	3	SB	4.40	TA	Fr	H	1800
21Z	6-3.12x3.00	68-4000	138.0	6.80	IL	I	AA	HG	100.0	51.0	50.0	156.0	58.0	51.0	6.40/13	abc	1-DD	TP	HS	3	SB	4.40	TA	Fr	H	
K3	8-3.06x3.75	95-3800	223.0	7.00	V	L	AA	HG	100.0	56.0	58.0	177.0	66.0	54.0	6.25/16	abc	1-DD	TP	HS	3	SB	3.50	TT	Fr	H	2600
P2	8-3.06x3.75	85-3500	223.0	6.12	V	L	AA	HG	112.0	56.0	58.0	192.0	71.0	60.0	6.25/16	abc	1-DD	TP	HS	3	SB	3.78	TT	Fr	H	3250
Alvis TC21 Saloon	6-3.31x3.54	93-4000	182.4	7.10	IL	I	AT	Ch	111.5	54.6	54.1	182.1	66.0	62.5	6.00/15	abce	2-SH	Pu	HS	4	Hy	4.09	Sp	Fr	H	3192
TC21 Coupe	6-3.31x3.54	100-4000	182.4	8.00	IL	I	AT	Ch	111.5	54.6	54.1	182.1	66.0	62.5	6.00/15	abce	2-SH	Pu	HS	4	Hy	4.09	Sp	Fr	H	3161
Armstrong-Siddeley 30HP	6-3.54x3.54	125-4700	209.6	6.50	IL	I	AA	Ch	114.0	56.6	57.5	193.0	72.0	63.0	6.70/16	abcde	1-Do	Pu	Pr	4	Hy	4.09	Sp	Fr	H	3472
30HP	6-3.54x3.54	150-5000	209.6	8.50	IL	I	AA	Ch	114.0	56.6	57.5	193.0	72.0	63.0	6.70/16	abcde	2-Do[V]	Pu	Pr	4	Hy	4.09	Sp	Fr	H	3472
Aston-Martin DB2	6-3.07x3.54	125-5000	157.4	8.16	IL	I	AA	Ch	99.0	54.0	54.0	162.5	65.0	63.5	6.00/16	abc	2-Ho	Pu	HS	4	Hy	3.77	Sp	Fr	H	2484
DB2/4	6-3.07x3.54	125-5000	157.4	8.16	IL	I	AA	Ch	99.0	54.0	54.0	162.5	65.0	53.5	6.00/16	abc	2-Ho	Pu	HS	4	Hy	3.73	Sp	Fr	H	2632
Austin A30-7	4-2.28x3.00	28-4800	48.8	7.20	IL	I	AA	Ch	79.5	45.3	44.8	138.6	55.1	58.2	5.20/13	abce	1-Do	Pu	HS	4	Hy	5.13	Sp	Fr	HM	1484
A40-GS4, GD5	4-2.58x3.50	42-4500	73.2	7.20	IL	I	AA	Ch	92.5	48.0	50.0	159.5	61.8	64.0	5.25/16	abce	1-Do	Pu	HS	4	SB	5.14	Sp	Fr	H	2142
A70	4-3.13x4.38	68-3800	134.2	6.80	IL	I	AA	Ch	99.0	54.0	56.0	167.5	69.6	65.8	6.00/16	abce	1-Do	Pu	HS	4	SB	4.13	Sp	Fr	H	2702
A125	6-3.44x4.38	.....	244.0	6.80	IL	I	AA	Ch	119.3	58.0	60.0	191.5	73.0	67.0	6.50/16	abce	1-Do	Pu	HS	4	Hy	4.09	Sp	Fr	H	4158
A135	6-3.44x4.38	.....	244.0	6.80	IL	I	AA	Ch	119.3	58.0	60.0	192.5	74.5	66.0	6.50/16	abce	1-Do	Pu	HS	4	Hy	4.09	Sp	Fr	H	4336
Austin-Healey BN1	4-3.44x4.38	90-4000	162.2	7.50	IL	I	AA	Ch	90.0	49.0	50.8	151.0	60.5	49.3	5.90/15	abce	2-Do	Pu	HS	3	SB	4.13	TaS	....	H	2156
100	4-3.44x4.37	90-4000	162.2	7.50	IL	I	AA	Ch	ww	49.0	50.8	.....	60.0	47.0	5.90/15	abce	2-ST	Pu	HS	3	SB	4.12	Sp	Fr	H	2150
Bentley Saloon	6-3.62x4.50	.....	279.0	6.75	IL	F	AA	HG	120.0	58.5	58.5	199.5	70.0	66.0	6.50/16	abcde	2-SH	Pu	Au	4	Hy	3.73	Sp	Fr	HM	4170
Bristol 403	6-2.60x3.78	100-5000	120.2	7.50	IL	I	AA	Ch	114.0	51.7	54.0	191.7	67.0	60.0	5.75/16	abcde	3-Do	Pu	HS	4	SB	3.90	RA	Fr	H	2700
Citroen 2CV	2-2.44x2.44	9-3800	28.9	6.20	HO	I	AA	SG	93.5	49.6	49.6	148.8	58.3	63.0	4.90/15	abce	1-SD	AC	HS	4	SB	3.87	Sp	FR	H	1120
Light 15	4-2.99x3.94	56-4250	116.6	6.50	IL	I	AA	Ch	114.5	54.0	53.3	175.0	65.3	60.0	6.50/15	abce	1-SD	Pu	HS	3	SB	3.46	Sp	Fr	H	2380
Big 15	4-2.99x3.94	56-4250	116.6	6.50	IL	I	AA	Ch	121.5	58.5	57.8	186.0	70.0	61.0	6.50/15	abce	1-SD	Pu	HS	3	SB	3.46	Sp	Fr	H	2548
6 Cylinder	6-2.99x3.94	76-3800	174.8	6.50	IL	I	AA	Ch	121.5	58.5	58.5	191.0	70.0	61.0	7.25/15	abce	1-DD	Pu	HS	3	SB	3.87	Sp	Fr	H	2940
Daimler Regency	6-3.25x4.25	92-3600	211.5	6.70	IL	I	AA	Ch	114.0	56.0	57.0	193.0	71.0	62.5	6.50/16	abce	2-Ho	Pu	Pr	4	Hy	4.30	Sp	Fr	HM	4032
DF306	6-3.25x4.25	114-4000	211.5	7.50	IL	I	AA	Ch	114.0	56.0	57.0	194.1	70.5	60.5	6.50/16	abce	2-Ho	Pu	Pr	4	Hy	4.89	Sp	Fr	HM	4144
DE36	8-3.35x4.72	150-3600	333.0	6.30	IL	I	AA	Ch	147.0	60.0	63.0	222.0	73.5	72.0	8.00/17	abce	2-Do	Pu	Pr	4	Hy	4.09	TA	Fr	MH	5910
Conquest	6-3.00x3.50	75-4000	.....	7.00	IL	I	AA	Ch	104.0	52.0	52.0	.....	65.0	62.0	6.70/15	abce	1-Do	Pu	Pr	4	Hy	4.56	Sp	Fr	MH	3080
Conquest Roadster	6-3.00x3.50	100-4400	148.4	7.75	IL	I	AA	Ch	104.0	52.0	52.0	.....	64.0	....	5.00/15	abce	2-Ho	Pu	Pr	4	Hy	3.73	Sp	Fr	MH	2680
Dellow MK II	4-2.50x1.14	31-4000	71.4	6.16	IL	L	AA	Ch	84.0	45.0	45.0	138.0	53.0	51.0	6.00/16	abce	1-Do	Pu	HS	3	SB	5.50	TT	N	M	1288
MK III	4-2.50x1.14	31-4000	71.4	6.16	IL	L	AA	Ch	96.0	45.0	45.0	150.0	55.0	51.0	5.50/16	abce	1-Do	Pu	HS	3	SB	5.50	TT	N	M	1400
MK IV	4-3.12x3.00	47-4400	92.0	6.80	IL	I	AA	Ch	96.0	50.0	49.5	150.0	56.0	50.0	5.90/13	abcde	2-DH	Pu	HS	3	SB	4.60	TA	N	M	1485
Ford Zephyr Six	6-3.12x3.00	68-4000	138.0	6.80	IL	I	AS	Ch	104.0	50.0	49.0	171.9	63.9	60.8	6.40/13	abce	1-SD	Pu	HS	3	Hy	4.44	Sp	Fr	H	2447
Consul	4-3.12x3.00	47-4400	92.0	6.80	IL	I	AS	Ch	100.0	50.0	49.0	166.7	64.0	60.8	5.90/13	abce	1-SD	Pu	HS	3	Hy	4.56	Sp	Fr	H	2262
New Anglia	4-2.50x3.64	36-4400	71.6	7.00	IL	L	AS	Ch	87.0	48.0	47.5	151.3	60.4	59.3	5.20/13	abcde	1-SD	Pu	HS	3	SB	4.43	Sp	Fr	H	1550
New Prefect	4-2.50x3.64	36-4400	71.6	7.00	IL	L	AS	Ch	87.0	48.0	47.5	151.3	60.4	59.3	5.20/13	abcde	1-SD	Pu	HS	3	SB	4.43	Sp	Fr	H	1602
Popular	4-2.50x3.64	30-4000	71.6	6.16	IL	L	AA	Ch	90.0	45.0	45.0	151.5	56.5	64.3	4.50/17	abcde	1-SD	TS	HS	3	SB	5.50	TT	N	M	.....
Frazer-Nash †Gran Sport	6-2.60x3.78	140-5750	120.2	9.00	IL	I	AA	Ch	96.0	50.0	52.0	150.0	61.5	36.0	5.50/16	abcde	3-Do	Pu	HS	4	SB	3.60	RA	Fr	H	1680
†Turismo	6-2.60x3.78	100-5000	120.7	7.50	IL	I	AA	Ch	96.0	50.0	52.0	150.0	61.5	36.0	5.50/16	abcde	3-Do	Pu	HS	4	SB	3.60	RA	Fr	H	1680
†Mark II	6-2.60x3.78	140-5750	120.2	9.00	IL	I	AA	Ch	96.0	50.0	54.0	141.0	63.5	38.0	5.50/16	abcde	3-Do	Pu	HS	4	SB	3.60	RA	FR	H	1400
†Mille Miglia	6-2.60x3.78	140-5750	120.2	9.00	IL	I	AA	Ch	96.0	50.0	52.0	150.0	61.5	36.0	5.50/16	abcde	3-Do	Pu	HS	4	SB	3.60	RA	Fr	H	1764
Fixed Head Coupe	6-2.60x3.78	140-5750	120.2	9.00	IL	I	AA	Ch	96.0	50.0	52.0	156.0	61.5	51.0	5.50/16	abcde	3-Do	Pu	HS	4	SB	3.60	RA	Fr	H	1850
Healey 3 Litre	6-3.31x3.54	106-4200	182.6	7.00	IL	I	AA	Ch	102.0	54.0	53.0	170.0	65.0	50.0	5.90/15	abce	2-ST	Pu	HS	4	Hy	3.77	TA	Fr	H	2550
Hillman Minx	4-2.56x3.74	42-4200	77.2	6.83	IL	L	AA	Ch	93.0	48.6	48.5	162.5	63.5	60.0	5.50/15	abce	1-Do	Pu	HS	4	SB	5.22	Sp	Fr	H	2053
HRG 1500	4-2.87x3.52	61-4800	91.4	7.50	IL	I	AA	Ch	103.5	48.0	45.0	146.0	59.0	....	5.50/17	abce	2-Do	Pu	HS	4	Hy	4.10	Sp	N	M	1372
Humber Hawk	4-3.19x4.33	58-3400	138.2	6.32	IL	L	AA	Ch	105.5	56.0	57.0	180.5	70.0	64.2	6.40/15	abce	1-Do	Pu	HS	4	Hy	4.55	....	Fr	H	2905
Super Snipe	6-3.50x4.37	116-3600	252.6	7.13	IL	I	AA	Ch	115.7	57.9	56.2	197.0	73.5	66.0	7.00/15	abcde	1-Do	Pu	HS	4	Hy	3.90	Sp	Fr	H	3873
Pullman	6-3.50x4.37	116-3600	252.6	7.13	IL	I	AA	Ch	131.0	57.9	62.2	211.9	74.8	69.0	7.50/16	abcde	1-Do	Pu	HS	4	SB	4.09	Sp	Fr	H	4778
Jaguar Mark VII	6-3.27x4.17	160-5200	210.0	8.00	....	....	....	....	120.0	....	57.5	196.5	73.0	63.0	6.70/16	.....	.....	.....	.....	4	.....	4.27	.....	Fr	H	3696
XK120 Sports	6-3.27x4.17	160-5200	210.0	8.00	....	....	....	....	102.0	51.0	....	173.5	62.0	52.5	6.00/16	.....	.....	.....	.....	4	.....	3.54	.....	Fr	H	2744
XK120 Coupe	6-3.27x4.17	160-5200	210.0	8.00	....	....	....	....	102.0	51.0	....	173.5	62.0	55.0	6.00/16	.....	.....	.....	.....	4	.....	3.54	.....	Fr	H	2856
XK120C	6-3.27x4.17	200-5800	210.0	8.00	....	....	....	....	96.0	51.0	51.0	157.0	64.5	38.5	6.00/16	.....	.....	.....	.....	4	.....	3.31	.....	Fr	H	2972
Jensen Interceptor	6-3.43x4.37	130-4000	243.0	6.80	IL	I	AA	Ch	114.0	54.0	57.0	183.0	66.0	....	6.00/16	ac	1-Do	Pu	HS	4	Hy	3.77	Sp	Fr	H	2900
541	6-3.43x4.37	130-3800	243.4	6.80	IL	I	AA	Ch	105.0	52.0	52.0	174.0	63.0	53.0	6.00/16	abce	1-Do	TP	HS	4	Hy	3.31	Sp	Fr	H	2500
Jowett Javelin	4-2.86x3.54	52-4500	91.1	7.20	HO	I	AA	Ch	102.0	52.0	49.8	168.0	61.0	62.5	5.25/16	abce	2-SD	Pu	HS	4	Hy	4.88	TA	FR	H	2240
Jupiter	4-2.86x3.54	60-4500	91.1	8.00	HO	I	AA	Ch	93.0	52.0	50.5	168.0	62.0	58.0	5.50/16	abce	2-SD	Pu	HS	4	Hy	4.56	TA	FR	H	1792
R4 Jupiter	4-2.86x3.54	64-5000	90.9	8.50	HO	I	AA	Ch	84.0	52.0	49.0	139.0	62.5	54.0	5.90/15	abce	2-SD	Pu	HS	4	Hy	4.44	Sp	Fr	H	1568
Lagonda MK II	6-3.07x3.54	125-5000	157.2	8.16	IL	I	AA	Ch	113.5	56.4	56.8	188.0	68.0	64.0	6.00/16	abe	2-SH	Pu	HS	4	Hy	4.56	TT	FR	H	3360
3 Litre	6-3.27x3.54	140-5000	178.2	8.20	IL	I	AA	Ch	113.5	56.4	56.8	196.0	69.5	62.0	6.00/16	abc	2-Ho	Pu	HS	4	Hy	4.56	TT	FR	H	3556
Lanchester 14	4-3.00x4.25	60-4200	120.0	6.70	IL	I	AA	Ch	104.0	52.0	52.0	175.0	65.0	62.0	6.70/15	abce	1-Do	Pu	Pr	4	Hy	4.56	Sp	Fr	HM	3136
Lea-Francis 18 HP	4-3.35x4.33	95-4000	163.0	8.00	IL	I	AA	Ch	111.0	52.1	52.4	184.0	64.0	60.5	6.00/16	abce	1-ST	Pu	HS	4	Hy	3.91	Sp	Fr	H	3024
2½ Litre	4-3.35x4.33	100-4000	163.0	7.00	IL	I	AA	Ch	99.0	52.1	52.4	168.0	62.0	52.0	6.00/16	abce	2-ST	Pu	HS	4	Hy	3.64	Sp	Fr	H	2576
14 HP	4-2.95x3.94	70-4700	108.0	7.25	IL	I	AA	CH	111.0	52.1	52.4	184.0	64.0	60.5	6.00/16	abce	1-ST	Pu	HS	4	Hy	4.88	Sp	Fr	H	2828
14 HP Estate Car	4-2.95x3.94	65-4700	108.0	7.25	IL	I	AA	CH	111.0	52.1	52.4	184.0	64.0	64.0	6.00/16	abce	1-ST	Pu	HS	4	Hy	4.88	Sp	Fr	H	2828
MG TF	4-2.62x3.54	NA	76.3	8.00	IL	I	AA	Ch	94.0	47.4	50.0	147.0	59.8	52.5	5.50/15	abce	2-Ho	Pu	HS	4	Hy	4.88	Sp	Fr	H	1904
Magnette	4-2.88x3.50	60-4600	90.8	7.15	IL	I	AA	Ch	102.0	51.0	51.0	169.0	63.0	58.0	5.50/15	abce	2-SD	Pu	HS	4	Hy	4.88	Sp	Fr	H	2464
Morgan Plus 4	4-3.35x3.62	68-4200	127.6	6.70	IL	I	AA	Ch	96.0	47.0	47.0	144.0	56.0	52.5	5.25/16	abcde	1-Do	Pu	HS	4	Hy	3.72	Sp	Fr	H	1700
Morris Oxford	4-2.89x3.43	41-4000	90.0	6.60	IL	L	AA	HG	97.0	53.5	53.0	167.0	65.0	63.0	5.50/15	abce	1-Ho	Pu	HS	4	Hy	4.88	Sp	Fr	H	2218
Six	6-2.89x3.43	70-4800	135.0	6.50	IL	I	AW	VS	110.0	54.0	53.0	177.0	66.0	63.5	6.00/15	abce	1-Ho	Pu	HS	4	Hy	4.55	Sp	Fr	H	2744
Minor, Series II	4-2.28x3.00	30-4800	48.8	7.20	IL	I	AT	Ch	86.0	50.6	50.3	148.0	61.1	60.0	5.00/14	abce	1-SH	Pu	HS	4	Hy	5.38	Sp	Fr	H	1722
Riley 1½ Litre	4-2.72x3.94	55-4500	91.3	6.80	IL	I	AA	Ch	112.5	52.2	52.2	179.0	63.5	59.0	5.75/16	abce	1-Ho	Pu	HS	4	SB	4.89	Sp	Fr	H	2688
Pathfinder	4-3.17x4.73	110-4500	149.0	7.20	IL	I	AA	Ch	113.5	54.0	54.5	183.0	67.0	60.0	6.70/16	abce	2-SD	Pu	HS	4	Hy	4.10	TA	Fr	H	3412
Rolls-Royce Silver Dawn	6-3.62x4.50	.....	279.0	6.75	IL	F	AA	HG	120.0	56.5	58.5	203.5	70.0	65.7	6.50/16	abcde	1-DD	Pu	HS	4	Hy	3.73	Sp	Fr	HM	4130
Silver Wraith	6-3.62x4.50	.....	279.0	6.40	IL	F	AA	HG	127.0	58.5	60.5	206.0	73.0	67.5	7.50/16	abcde	1-SD	Pu	Au	4	Hy	3.73	Sp	Fr	HM	....
Silver Wraith	6-3.62x4.50	.....	279.0	6.40	IL	F	AA	HG	133.0	58.5	60.5	206.0	73.0	67.5	7.50/16	abcde	1-SD	Pu	Au	4	Hy	3.73	Sp	Fr	HM	....

For Key to References and Abbreviations See Page 84

FOREIGN CARS

MAKE AND MODEL	ENGINE: Number of Cylinders, Bore and Stroke (In.)	ENGINE: Maximum Brake Hp. at Specified R.P.M.	ENGINE: Piston Displacement (Cu In.)	ENGINE: Compression Ratio (To -1)	ENGINE: Cylinder Arrangement	ENGINE: Valve Location	ENGINE: Piston Material	ENGINE: Camshaft Drive	GENERAL DATA: Wheelbase (In.)	GENERAL DATA: Tread: Front (In.)	GENERAL DATA: Tread: Rear (In.)	GENERAL DATA: Overall Dimensions (In.): Length Including Bumpers and Bumper Guards	GENERAL DATA: Overall Dimensions (In.): Width	GENERAL DATA: Overall Dimensions (In.): Height—Road to Roof, No Load	GENERAL DATA: Tires (In.)	GENERAL DATA: Oil Pressure to—	GENERAL DATA: Carburetors—No. Used and Type	GENERAL DATA: Cooling System	GENERAL DATA: Shifting Method	GENERAL DATA: No. of Forward Speeds	REAR AXLE: Final Drive Type	REAR AXLE: Gear Ratio (To -1)	REAR AXLE: Torque Taken By	Independent Suspension	Service Brakes	Shipping Weight (Lb.)
BRITISH—continued																										
Rover 75	6-2.57x4.14	75-4200	128.2	7.25	IL	F	AA	Ch	111.0	52.0	51.5	178.2	65.6	63.7	6.00/15	abce	2-Ho	Pu	HS	4	SB	4.30	Sp	Fr	H	3116
60	4-3.06x4.13	60-4500	121.8	6.73	IL	F	AA	Ch	111.0	52.0	51.5	178.2	65.6	63.7	6.00/15	abce	1-SH	Pu	HS	4	SB	4.30	Sp	Fr	....	....
90	6-2.88x4.13	90-4500	160.9	6.73	IL	F	AA	Ch	111.0	52.0	51.5	178.2	65.6	63.7	6.00/15	abce	1-SH	Pu	HS	4	SB	4.30	Sp	Fr	H	3111
Singer SM Roadster	4-2.88x3.52	48-4200	91.3	7.00	IL	I	AA	Ch	91.0	46.7	46.7	151.5	58.0	58.5	5.00/16	abc	1-SD	Pu	HS	4	SB	4.88	Sp	Fr	HM	1800
SM 1500	4-2.88x3.52	48-4200	91.3	7.00	IL	I	AA	Ch	107.5	50.5	51.0	176.5	63.0	64.0	5.50/16	abc	1-SD	Pu	HS	4	Hy	5.12	Sp	Fr	H	2520
SM Roadster (Twin)	4-2.88x3.52	58-4600	91.3	7.47	IL	I	AA	Ch	91.0	46.7	46.7	151.5	58.0	58.5	5.00/16	abc	2-SD	Pu	HS	4	Hy	4.44	Sp	Fr	HM	1800
SM 1500 (Twin)	4-2.88x3.52	58-4600	91.3	7.47	IL	I	AA	Ch	107.5	50.5	51.0	176.5	63.0	64.0	5.50/16	abc	2-SD	Pu	HS	4	Hy	5.12	Sp	Fr	H	2520
Standard Vanguard	4-3.35x3.62	68-4200	127.6	7.00	IL	I	AA	Ch	94.0	51.0	54.0	167.0	69.0	64.0	6.00/16	abcde	1-SD	Pu	HS	3	Hy	4.62	Sp	Fr	H	2716
Eight	4-2.28x2.99	26-4500	49.0	7.40	IL	I	AA	Ch	84.0	48.5	48.5	142.0	58.0	60.0	5.20/13	abce	1-SD	Pu	HS	4	Hy	4.89	Sp	Fr	H	1484
Sunbeam-Talbot 90	4-3.19x4.33	77-4100	138.2	7.42	IL	I	AA	Ch	97.5	47.5	50.5	168.0	62.5	60.8	5.50/16	abce	1-Do	Pu	HS	4	Hy	3.90	Sp	Fr	H	2926
Alpine	4-3.19x4.33	80-4200	138.2	7.42	IL	I	AA	Ch	97.5	47.5	50.5	168.3	62.5	57.8	6.50/16	abce	1-Do	Pu	HS	4	Hy	3.90	Sp	Fr	H	2861
Triumph Renown	4-3.35x3.62	68-4200	127.6	7.00	IL	I	AA	Ch	111.0	51.0	54.0	181.0	54.0	65.0	5.75/16	abcde	1-SD	Pu	HS	3	Hy	4.62	Sp	Fr	H	2835
Sports	4-3.29x3.62	90-4800	121.5	8.50	IL	I	AA	Ch	88.0	45.0	45.5	151.0	55.5	50.0	5.50/15	abcde	2-Ho	Pu	HS	4	Hy	3.70	Sp	Fr	H	1981
Vauxhall Wyvern	4-3.12x3.00	44-4000	92.0	6.80	IL	I	AA	Ch	103.0	53.0	54.5	172.5	67.1	63.5	5.60/15	abce	1-Do	Pu	HS	3	Hy	4.62	Sp	Fr	H	2235
Velox	6-3.12x3.00	66-4000	138.0	6.80	IL	I	AA	Ch	103.0	53.0	54.5	172.5	67.1	63.5	5.90/15	abce	1-Do	Pu	HS	3	Hy	4.12	Sp	Fr	H	2355
Wolseley 6/80	6-2.89x3.43	NA	135.0	6.50	IL	I	AW	VS	110.0	54.0	53.0	177.0	66.0	63.5	6.00/15	abce	2-Ho	Pu	HS	4	Hy	4.55	Sp	Fr	H	3248
4/44	4-2.62x3.54	NA	76.3	7.30	IL	I	AA	Ch	102.0	50.7	53.0	173.0	61.0	60.0	5.50/15	abce	1-Ho	Pu	HS	4	Hy	5.13	Sp	Fr	H	2520
AUSTRALIA																										
Holden Standard FJ/215	6-3.00x3.12	60-3800	132.5	6.50	IL	I	AA	HG	103.0	53.0	54.0	173.3	66.8	61.6	5.50/15	abce	1-SD	Pu	HS	3	SbH	3.89	Sp	Fr	H	2186
Business FJ-217	6-3.00x3.12	60-3800	132.5	6.50	IL	I	AA	HG	103.0	53.0	54.0	173.3	66.8	61.6	5.50/15	abce	1-SD	Pu	HS	3	SbH	3.89	Sp	Fr	H	2205
Special FJ/225	6-3.00x3.12	60-3800	132.5	6.50	IL	I	AA	HG	103.0	53.0	54.0	173.3	66.8	61.6	5.90/15	abce	1-SD	Pu	HS	3	SbH	3.89	Sp	Fr	H	2175
CZECHOSLOVAKIA																										
Motokov Skoda 1200	4-2.83x2.95	36-4000	74.5	6.90	IL	I	AA	Ch	105.7	49.2	52.0	177.2	65.9	59.8	5.50/16	abce	1-Hu	Pu	HS	4	SB	5.25	TT	FR	H	2293
Tatraplan T600	4-3.35x3.39	52-4000	119.0	6.00	HO	I	AA	HG	106.3	51.2	51.2	178.7	65.8	59.8	6.00/16	abce	2-Do	AC	HS	4	SB	4.09	....	FR	H	2558
FRANCE																										
Bugatti 101	8-2.83x3.94	200-5500	198.7	6.50	IL	I	AA	HG	129.9	53.1	53.1	212.6	65.0	65.0	6.00/17	abcde	1-DD	Pu	HS	4	SB	....	TA	N	....	....
Citroen 11 CV Legere	4-3.07x3.94	58-4000	116.6	6.50	IL	I	AA	Ch	114.8	54.1	53.3	175.2	65.7	60.6	6.50/15	c	1-Do	Pu	HS	3	SB	3.44	Sp	Fr	H	3087
11 CV Normale	4-3.07x3.94	58-4000	116.6	6.50	IL	I	AA	Ch	121.7	58.8	57.9	183.1	70.5	60.6	6.50/15	c	1-Do	Pu	HS	3	SB	3.44	Sp	Fr	H	3418
15 CV Six	6-3.07x3.94	78-3500	174.9	6.50	IL	I	AA	HG	121.7	58.5	58.5	187.4	70.5	60.6	7.25/15	c	1-Do	Pu	HS	3	SB	3.88	Sp	Fr	H	3969
2 CV	2-2.44x2.44	9-3500	22.9	6.20	IL	...	AA	HG	94.4	49.6	49.6	148.8	58.3	63.0	4.90/15	c	1-Do	AC	HS	3	SB	3.88	Sp	FR	H	1784
11	4-3.07x3.94	58-4000	116.6	6.50	IL	I	AA	Ch	128.9	58.8	57.9	190.0	70.5	62.2	7.25/15	c	1-Do	Pu	HS	3	SB	3.88	Sp	Fr	H	4300
15	6-3.07x3.94	78-3500	174.9	6.50	IL	I	AA	HG	128.9	58.5	58.5	194.8	70.5	62.2	7.25/15	c	1-Do	Pu	HS	3	SB	3.88	Sp	Fr	H	4740
Ford Vedette	8-2.60x3.10	66-4800	132.0	7.00	V	L	AS	HG	106.0	53.2	54.4	184.0	68.0	62.0	6.40/15	abc	1-DD	Pu	HS	3	SB	4.33	Sp	Fr	H	2733
Comete	8-2.67x3.20	80-4800	143.7	7.40	V	L	AS	HG	106.0	53.2	54.4	181.8	68.3	55.9	6.40/15	abc	1-DD	Pu	HS	3	SB	4.55	Sp	Fr	H	2820
Vendome	8-3.19x3.75	100-3700	239.3	....	V	L	AA	BG	105.9	53.1	54.3	183.9	68.7	59.8	7.25/16	.....	1-DD	Pu	HS	3	SB	3.45	Sp	Fr	H	3075
Marathon Corsaire	2-3.35x3.05	42-5000	51.9	7.25	HO	...	....	....	....	44.9	43.7	142.0	59.1	47.3	5.00/15	.....	1-DD	AC	HS	4	....	....	....	FR	H	1600
Panhard Junior	2-1.78x2.85	42-5000	....	7.25	HO	...	AA	....	83.9	44.7	44.7	145.7	59.1	51.2	5.70/15	.....	1-DD	AC	HS	4	....	....	....	FR	H	....
Dyna 54	2-1.78x2.85	42-5000	....	7.25	HO	I	AA	....	101.4	51.2	51.2	179.9	63.0	57.1	5.70/15	.....	1-DD	AC	HS	4	....	....	....	FR	H	....
Pougeot 203	4-2.96x2.88	45-4500	78.7	6.97	IL	I	AA	Ch	101.5	52.0	52.0	171.2	63.5	61.5	6.00/16	.....	1-Do	Pu	HS	4	Wo	5.75	TT	Fr	H	1980
Renault R1062	4-2.15x3.15	21-4100	45.8	7.25	IL	I	AS	HG	82.7	47.8	47.8	142.7	56.3	57.9	5.00/15	abce	1-Do	Pu	HS	3	SB	4.71	....	FR	H	1213
R1100	4-3.35x3.46	.....	121.8	6.60	IL	I	AS	HG	110.2	55.1	55.1	185.0	67.7	60.5	6.40/15	abce	1-Do	Pu	HS	4	SB	4.88	TA	FR	H	2816
Rosengart	4-2.20x3.00	23-4500	....	6.75	IL	I	AA	HG	88.6	47.2	47.2	153.5	57.1	57.9	7.00/15	abce	1-SD	TS	HS	4	SB	5.56	Sp	Fr	H	1587
FTU	2-3.07x3.07	40-5000	45.6	6.50	HO	L	....	....	....	47.2	47.2	153.5	58.3	58.3	5.70/15	.....	....	AC	....	....	....	....	....	....	H	1543
LR4FT	2-3.07x3.07	40-5000	45.6	6.00	HO	...	....	....	....	47.2	47.2	153.5	58.3	58.3	6.10/15	.....	....	AC	....	....	....	....	....	....	H	1543
Simca 9 Sport	4-2.83x2.95	51-4800	74.5	7.80	IL	I	AS	Ch	96.1	49.4	49.2	167.7	61.8	54.7	5.50/15	abc	1-Do	Pu	HS	4	Hy	4.77	Sp	Fr	H	2006
9 Aronde	4-2.83x2.95	45-4500	74.5	6.75	IL	I	AA	Ch	96.1	48.6	48.4	160.5	61.3	57.7	5.50/15	abe	1-Do	Pu	HS	4	Hy	4.77	Sp	Fr	H	2050
Talbot Grand Sport	6-3.66x4.33	210-4500	273.4	8.00	IL	I	AS	Ch	114.2	55.9	58.5	.....	.....	.....	6.00/18	abcde	3-Do	Pu	Pr	4	SB	3.35	Sp	Fr	H	3527
Lago Record	6-3.66x4.33	170-4200	273.4	7.00	IL	I	AS	Ch	123.0	55.9	58.5	.....	.....	.....	6.00/18	abcde	3-Do	Pu	Pr	4	SB	3.58	Sp	Fr	H	3968
GERMANY																										
Borgward Hansa 1800	4-2.83x3.62	60-4200	107.2	6.35	IL	I	....	....	102.4	49.2	51.2	175.2	63.8	61.4	6.40/15	.....	1-Do	Pu	....	4	Hy	4.22	....	Fr	H	2520
Hansa 2400	6-3.07x3.21	82-4500	142.6	6.90	IL	I	....	....	103.1	53.5	55.9	175.6	70.1	58.7	6.70/15	.....	1-DD	Pu	HS	4	Hy	3.90	....	FR	H	4050
Hansa 1800 Diesel	4-3.07x3.62	42-3400	107.2	19.80	IL	I	AA	BG	102.4	49.2	51.2	175.3	63.8	61.4	6.40/15	abc	Inj	Pu	HS	4	Hy	4.22	Sp	FR	H	2668
Hansa 1500	4-2.83x3.62	60-5200	91.4	8.50	IL	I	AA	BG	94.5	49.5	51.2	164.0	63.8	54.3	5.90/15	abc	1-DD	Pu	HS	4	Hy	3.75	Sp	FR	H	2536
Hansa 1800	4-3.07x3.62	60-....	107.2	6.35	IL	I	....	....	94.5	49.5	51.2	164.0	63.8	54.3	5.90/15	abcde	1-Do	Pu	....	4	....	3.75	....	Fr	H	2536
Hansa 2400 Pullman	6-3.07x3.21	82-4200	142.6	6.90	IL	I	....	HG	111.0	53.5	56.0	183.0	70.1	58.8	6.40/15	.....	1-DD	Pu	....	4	....	....	....	FR	H	3316
Ford Taunus 12M	4-2.50x3.64	38-4250	71.5	6.80	IL	L	AS	HG	98.0	48.0	48.0	160.4	62.2	61.0	5.90/13	abc	1-Do	Pu	HS	3	SB	4.37	Sp	Fr	H	1810
Taunus 12	4-2.50x3.64	38-4250	71.5	6.80	IL	L	AS	HG	98.0	48.0	48.0	160.4	62.2	61.0	5.60/13	abc	1-Do	Pu	HS	3	SB	4.37	Sp	Fr	H	1750
Goliath GP700	2-2.91x3.15	28-4000	42.0	6.40	IL	...	AA	SG	90.6	49.5	49.5	163.4	63.0	57.1	5.00/16	.....	1-Do	TS	HS	4	HG	....	Sp	Fr	H	1913
GP700E	2-3.01x3.15	29-4000	42.0	7.70	IL	...	AA	N	90.6	49.2	49.2	158.7	62.2	56.0	5.00/15	.....	Inj	Pu	HS	4	....	....	Sp	Fr	H	1918
Lloyd LP/LS400	2-2.44x2.52	13-3250	23.5	6.85	IL	N	AA	N	78.7	41.3	41.3	135.8	55.3	55.1	4.25/15	N	1-ST	AC	HS	3	StB	4.82	Sp	FR	H	1003
LT500/PKW	2-2.44x2.52	13-3250	23.5	6.85	IL	N	AA	N	92.5	47.2	47.2	139.0	57.1	63.8	5.00/15	N	1-ST	AC	HS	3	StB	5.22	Sp	FR	H	1312
Mercedes-Benz 220	6-3.16x2.86	80-3800	134.0	6.50	IL	I	AA	Ch	112.0	51.8	56.5	177.5	66.4	63.4	6.40/15	abcde	1-DD	Pu	HS	4	Hy	4.44	TT	FR	H	2981
300	6-3.34x3.47	115-4600	182.7	6.40	IL	I	AA	Ch	120.3	52.8	60.0	194.9	71.7	64.0	7.10/15	abcde	1-SD	Pu	HS	4	Hy	4.44	TT	FR	H	3862
300S	6-3.34x3.47	150-....	182.7	7.50	IL	I	AA	Ch	114.2	58.3	60.0	181.1	71.7	59.5	6.70/15	abcde	3-Do	Pu	HS	4	Hy	4.13	TT	FR	H	3568
300SL	6-3.34x3.47	173-5200	182.8	8.00	IL	I	....	Ch	94.5	....	....	166.0	70.5	49.8	6.70/15	.....	3-Do	....	....	4	Hy	....	....	Fr	H	1918
170S-V	4-2.95x3.94	45-3600	107.8	6.50	....	L	....	....	112.0	51.6	56.5	175.3	66.3	65.5	5.50/16	.....	....	....	HS	4	....	....	....	FR	H	2260
170S-D	4-2.95x3.94	40-3200	107.8	19.00	....	I	....	....	112.0	51.6	56.5	175.3	66.3	65.5	5.50/16	.....	....	....	HS	4	....	....	....	FR	H	2380

For Key to References and Abbreviations See Page 84

FOREIGN CARS

MAKE AND MODEL	ENGINE: Number of Cylinders, Bore and Stroke (In.)	ENGINE: Maximum Brake Hp. at Specified R.P.M.	ENGINE: Piston Displacement (Cu In.)	ENGINE: Compression Ratio (To -1)	ENGINE: Cylinder Arrangement	ENGINE: Valve Location	ENGINE: Piston Material	ENGINE: Camshaft Drive	GENERAL DATA: Wheelbase (In.)	GENERAL DATA: Tread: Front (In.)	GENERAL DATA: Tread: Rear (In.)	GENERAL DATA: Overall Dimensions (In.): Length Including Bumpers and Bumper Guards	GENERAL DATA: Overall Dimensions (In.): Width	GENERAL DATA: Overall Dimensions (In.): Height—Road to Roof, No Load	GENERAL DATA: Tires (In.)	GENERAL DATA: Oil Pressure to—	GENERAL DATA: Carburetors—No. Used and Type	GENERAL DATA: Cooling System	GENERAL DATA: Shifting Method	GENERAL DATA: No. of Forward Speeds	REAR AXLE: Final Drive Type	REAR AXLE: Gear Ratio (To -1)	REAR AXLE: Torque Taken By	Independent Suspension	Service Brakes	Shipping Weight (Lb.)
GERMANY—cont'd																										
Mercedes-Benz (Con't)																										
180	4-2.95x3.94	52-4000	107.8	6.70	....	L	....	....	104.3	55.9	57.4	175.5	68.5	61.4	6.40/13	....	....	....	HS	4	Hy	3.89	....	FR	H	2100
220	6-3.15x2.87	80-4600	133.9	....	....	I	....	....	112.0	51.8	56.5	177.5	68.3	63.3	6.40/15	....	....	....	....	4	....	....	....	FR	H	2500
300	6-3.35x3.46	115-4600	182.8	....	....	I	....	....	120.0	58.3	60.0	194.8	72.3	63.0	7.10/15	....	....	....	....	4	....	....	....	FR	H	3300
300S	6-3.35x3.46	150-5000	182.8	....	....	I	....	....	112.0	58.3	60.0	186.1	75.3	59.4	6.70/15	....	....	....	....	4	....	....	....	FR	H	3200
Opel Olympia-Rekord	4-3.15x2.91	50-4400	90.8	6.70	IL	I	AS	HG	97.9	47.2	49.9	166.9	64.0	61.0	5.60/13	abcde	1-Do	Pu	HS	3	Hy	3.90	Sp	Fr	H	1907
Kapitan	6-3.15x3.23	74-4000	150.9	7.00	IL	I	AS	HG	108.3	52.8	54.0	185.4	69.3	62.2	6.40/13	abcde	1-Do	Pu	HS	3	Hy	3.90	Sp	Fr	H	2590
Porsche 1100	4-2.89x2.52	40-4000	66.2	7.00	HO	I	AA	HG	82.7	50.8	49.2	155.6	65.5	51.2	5.00/16	abce	1-Do	AC	HS	4	SB	4.38	TA	FR	H	1642
1300	4-3.15x2.52	44-4200	78.4	6.50	HO	I	AA	HG	82.7	50.8	49.2	155.6	65.5	51.2	5.00/16	abce	1-Do	AC	HS	4	SB	4.38	TA	FR	H	1642
1300 Super	4-2.94x2.91	60-5500	78.7	8.20	HO	I	AA	HG	82.7	50.8	49.2	155.6	65.5	51.2	5.00/16	abce	1-Do	AC	HS	4	SB	4.38	TA	FR	H	1642
1500	4-3.15x2.91	55-4400	90.8	7.00	HO	I	AA	HG	82.7	50.8	49.2	155.6	65.5	51.2	5.00/16	abce	1-Do	AC	HS	4	SB	4.38	TA	FR	H	1642
1500 Super	4-3.15x2.91	70-5000	90.8	8.20	HO	I	AA	HG	82.7	50.8	49.2	155.6	65.5	51.2	5.00/16	abce	1-Do	AC	HS	4	SB	4.38	TA	FR	H	1642
Volkswagen 1/11	4-3.03x2.52	30-3400	72.7	6.10	HO	I	AS	HG	94.5	50.8	49.2	160.2	60.6	59.1	5.60/15	abc	1-SD	AC	HS	4	SB	4.40	TA	FR	■	1530
2/22	4-3.03x2.52	30-3400	72.7	6.10	HO	I	AS	HG	94.5	53.4	53.5	161.5	66.9	74.8	5.50/16	abc	1-SD	AC	HS	4	SDR	6.20	TA	FR	H	2200
ITALY																										
Alfa-Romeo 1900/Normale	4-3.25x3.46	80-4800	114.9	7.50	IL	I	AA	Ch	103.5	51.5	51.5	173.2	62.9	58.6	6.50/16	abc	1-Up	Pu	HS	4	Hy	4.10	....	Fr	H	2535
1900C	4-3.25x3.46	100-5500	114.9	7.75	IL	I	AA	Ch	98.4	51.5	51.5	172.8	64.1	53.1	(1)	abc	2-Up	Pu	HS	4	Hy	4.10	....	Fr	H	2315
1900/AR52	4-3.25x3.46	65-4400	114.9	7.00	IL	I	AA	Ch	86.6	51.1	51.1	138.5	58.2	71.6	6.40/16	abce	1-SD	Pu	HS	8	SB	4.10	Sp	Fr	H	2870
1900T1	4-3.25x3.46	100-5500	114.9	8.00	IL	I	AA	Ch	103.5	52.4	52.4	173.2	63.0	58.7	6.50/15	abc	2-Do	Pu	HS	4	Hy	4.10	....	Fr	....	2425
Ferrari 250 Europa	12-2.68x2.68	200-6300	180.8	8.00	V	I	....	Ch	109.2	51.7	51.5	....	....	....	7.10/15	abcde	3-DD	Pu	HS	4	....	....	....	Fr	H	2300
375 America	12-3.31x2.68	300-6300	275.8	8.00	V	I	....	Ch	109.2	51.7	51.5	....	....	....	7.10/15	abcde	3-DD	Pu	HS	4	....	....	....	Fr	H	2300
375 Millemiglia	12-3.31x2.68	340-7000	275.8	9.00	V	I	....	....	105.9	52.2	52.0	....	....	....	(2)	....	3-DF	Pu	HS	4	....	....	....	Fr	H	1984
500 Mondial	4-3.54x3.07	170-7000	121.1	9.50	IL	I	....	....	88.5	50.3	50.6	....	....	....	(3)	....	2-DT	Pu	HS	4	....	....	....	Fr	H	1543
Fiat 500C	4-2.05x2.64	17-4400	34.8	6.45	IL	I	AA	Ch	78.8	44.0	42.7	128.0*	50.6	55.5	4.25/15	abc	1-SD	TS	HS	4	SB	5.12	Sp	Fr	H	1276
1400	4-3.23x2.60	44-4400	85.1	6.70	IL	I	AA	Ch	104.3	52.2	52.0	169.5	65.1	62.0	5.90/14	abce	1-SD	Pu	HS	4	Hy	4.44	Sp	Fr	H	2391
1900	4-3.25x3.54	59-3700	116.0	6.70	IL	I	AA	Ch	104.3	52.3	52.1	169.5	65.1	62.6	6.40/14	abce	1-SD	Pu	HS	5	Hy	4.44	Sp	Fr	H	2545
8V	8-2.83x2.41	105-6000	121.8	8.50	V	I	AA	Ch	94.5	50.8	50.8	159.0	61.8	50.8	6.50/15	abce	2-DD	Pu	HS	4	Hy	4.44	TA	FR	H	2047
103,000	4-2.68x2.95	36-4400	66.4	6.70	IL	I	AA	Ch	92.1	48.4	47.7	148.6	57.4	58.5	5.20/14	abce	1-SD	Pu	HS	4	Hy	4.30	Sp	Fr	H	1743
103,006	4-2.68x2.95	50-5600	66.4	7.60	IL	I	AA	Ch	92.1	48.4	47.7	148.6	57.4	58.5	5.20/14	abce	1-DD	Pu	HS	4	Hy	4.30	Sp	Fr	H	1798
305,010	4-3.23x3.54	40-3200	116.0	20.00	IL	I	AA	HG	104.3	52.4	52.1	189.5	65.1	62.6	6.40/14	abce	Inj	Pu	HS	4	Hy	4.10	Sp	Fr	H	2624
500B	4-2.05x2.64	17-4400	34.7	6.45	IL	I	AA	Ch	78.8	44.0	42.7	103.7*	50.5	57.3	(4)	abc	1-SD	TS	HS	4	SB	5.12	Sp	Fr	H	1408
Lancia Aurelia B15	6-2.83x3.21	65-4000	121.5	7.00	V	I	AA	Ch	128.0	51.2	52.0	189.4	62.8	61.2	7.30/16	abce	1-DD	Pu	HS	4	SB	5.22	TA	FR	H	2813
Aurelia B21	6-2.83x3.21	70-4500	121.5	7.80	V	I	AA	Ch	112.6	50.5	51.2	174.0	61.5	59.0	5.50/16	abce	1-DD	Pu	HS	4	SB	4.70	TA	FR	H	2479
Aurelia B22	6-2.83x3.21	90-5000	121.5	7.80	V	I	AA	Ch	112.6	50.5	51.2	174.0	61.5	59.0	6.50/16	abce	1-DD	Pu	HS	4	SB	4.44	TA	FR	H	2475
Aurelia B52	6-2.83x3.21	70-4500	121.5	7.80	V	I	AA	Ch	114.6	50.5	51.2	161.0	57.5	....	5.50/16	abce	1-DD	Pu	HS	4	SB	4.70	TA	FR	H	1733
Aurelia B53	6-2.83x3.21	70-4500	121.5	7.80	V	I	AA	Ch	114.6	51.3	52.0	161.0	57.5	....	7.30/16	abce	1-DD	Pu	HS	4	SB	4.89	TA	FR	H	1786
Appia	4-2.68x2.95	38-3800	66.5	7.40	V	I	AA	Ch	97.6	46.4	46.5	152.2	55.9	56.0	5.80/15	abce	1-SD	Pu	HS	4	Hy	4.55	....	Fr	H	1612
Aurelia 2500	6-3.07x3.37	118-5000	149.5	8.00	V	I	AA	Ch	104.7	50.4	51.2	172.1	61.0	53.5	6.50/15	abce	1-DD	Pu	HS	4	SB	4.22	....	FR	H	2175
Maserati A6G/2000	6-2.83x3.15	100-5500	119.2	7.80	IL	I	AA	Ch	100.3	50.1	49.2	179.1	63.8	55.1	5.50/16	.....	3-...	Pu	HS	4	SB	4.22	....	Fr	H	2205
A6GCM/2000	6-3.02x2.83	.....	203.7	11.00	IL	I	AA	SG	89.8	50.3	47.2	.....	.....	.....	(5)	abce	1-DT	Pu	HS	4	SB	Var	TA	....	H	....
A6GCS/2000	6-3.01x2.83	160-6750	202.5	(6)	IL	I	AA	SG	90.9	51.5	48.0	.....	.....	.....	6.00/16	abce	1-DT	Pu	HS	4	SB	Var	TA	Fr	H	....
JAPAN																										
Nissan Datsun DB-5	4-2.36x2.99	24-4000	52.5	6.50	IL	L	AA	HG	84.6	41.3	46.5	149.8	58.3	61.4	5.50/15	e	1-Do	Pu	HS	3	Wo	6.50	Sp	N	H	1962
Datsun DS-5	4-2.36x2.99	24-4000	52.5	6.50	IL	L	AA	HG	84.6	41.3	46.5	150.2	57.4	60.8	5.50/15	e	1-Do	Pu	HS	3	Wo	6.50	Sp	N	H	2055
Ohta PA	4-2.42x2.99	24-4000	55.1	....	IL	L	AA	HG	82.7	43.3	45.3	151.0	58.3	62.2	5.00/16	abce	1-SD	Pu	HS	3	SB	6.50	Sp	N	H	2122
PF	4-2.42x2.99	24-4000	55.1	6.50	IL	L	AA	HG	91.7	47.2	52.0	160.0	63.0	61.5	5.00/16	abce	1-SD	Pu	HS	3	SB	6.50	Sp	N	H	2205
PH	4-2.42x2.99	24-4000	55.1	6.50	IL	L	AA	HG	82.7	43.3	45.3	151.0	58.3	61.0	5.00/16	abce	1-SD	Pu	HS	3	SB	6.50	Sp	N	H	2042
Toyopet Custom SH	4-2.56x2.95	28-4000	60.7	6.50	IL	L	AA	HG	98.4	52.2	53.1	168.5	62.6	63.0	6.00/16	abce	1-SD	Pu	HS	4	SB	6.17	Sp	N	H	2728
Super RH	4-3.03x3.07	48-4000	88.5	8.80	IL	L	AA	HG	98.4	52.2	53.1	168.5	62.6	63.0	6.00/16	abce	1-SD	Pu	HS	4	SB	5.29	Sp	N	H	2794
SPAIN																										
Pegaso 102B/2.5	8-2.95x2.76	...-6300	150.5	(7)	V	I	AA	HG	92.0	52.0	50.8	161.4	....	50.4	5.50/16	abc	(8)	Pu	HS	5	SB	(9)	Sp	Fr	H	2183
102B/2.8	8-3.14x2.76	...-6300	171.5	(10)	V	I	AA	HG	92.0	52.0	50.8	162.0	63.0	51.0	6.00/16	abc	(8)	Pu	HS	5	SB	(9)	Sp	Fr	H	2183
102BS/2.5	8-2.95x2.76	...-6800	150.5	(11)	V	I	AA	HG	92.0	52.0	50.8	161.4	....	(12)	6.50/16	abc	1-DH	Pu	HS	5	SB	(9)	Sp	Fr	H	2337
102BS/2.8	8-3.14x2.76	250-6800	171.5	(13)	V	I	AA	HG	92.0	52.0	50.8	162.0	63.0	51.0	6.50/16	abc	1-DH	Pu	HS	5	SB	(9)	Sp	Fr	H	2340
SWEDEN																										
SAAB 92B	2-3.15x2.99	28-4000	46.6	6.60	IL	N	AA	N	97.2	46.4	46.4	155.5	53.7	57.0	5.00/15	N	1-SD	TS	HS	3	SG	5.35	TA	FR	H	1800
Volvo PV-444-E	4-3.95x3.15	44-4000	86.0	6.40	IL	I	AA	HG	102.3	51.2	51.8	177.0	62.0	65.0	5.90/15	abc	1-SD	Pu	HS	3	Hy	4.56	TA	Fr	H	1996
PV-831-832	6-3.31x4.33	90-3600	223.8	6.50	IL	L	AA	Ch	127.9	59.2	60.0	205.0	73.0	70.0	7.00/15	abc	1-SD	Pu	HS	3	Hy	4.45	Sp	Fr	H	3781
PV-445-DH	4-3.95x3.15	44-4000	86.0	6.40	IL	I	AA	HG	102.3	51.2	51.8	174.0	63.0	66.0	6.00/15	abc	1-SD	Pu	HS	3	Hy	5.43	Sp	Fr	H	2270

ABBREVIATIONS

*—Four barrel carburetor optional.
†—Alternate engine, transmission and rear axle available.
■—Mechanical or hydraulic.
•—Without bumpers.
(1)—6.00 or 6.50/16.
(2)—6.00/16, front; 7.50/16, rear.
(3)—5.25/16, front; 6.00/16, rear.
(4)—4.25 or 4.40/15.
(5)—5.25/16, front; 6.50/16, rear.
(6)—8.25 or 8.75.
(7)—8.10, 8.50 or 9.00.
(8)—One or four dual downdrafts.
(9)—5.20, 4.73 or 4.36.
(10)—7.80, 8.20 or 8.80.
(11)—6.50, 7.10 or 7.50.
(12)—51.3 or 50.0.
(13)—6.00 or 7.30.
a—Main bearings.
b—Connecting rod bearings.
c—Camshaft bearings.
d—Piston pins.
e—Timing chain or gears.
AA—Aluminum alloy.
AC—Air cooled.
AS—Aluminum alloy and steel strut.
AT—Alloy, tin plated.
Au—Automatic.
AW—Alloy, wire wound.
BG—Bevel gear.
Ch—Chain.
CH—Chain and helical gear.
DD—Dual downdraft.
DF—Downdraft four barrel.
DH—Dual horizontal.
Do—Downdraft.
DT—Dual throat.
F—Valves inside and head.
Fr—Front.
FR—Front and rear.
H—Hydraulic.
HG—Helical gear.
HM—Hydraulic, front; mechanical, rear.
Ho—Horizontal.
HO—Horizontally opposed.
HS—Hand shift.
HU—Horizontal updraft.
Hy—Hypoid gear.
I—In head.
IL—In line.
Inj—Injectors.
L—Valves at side.
M—Mechanical.
MH—Mechanical and hydraulic.
N—No or none.
NA—Not available.
Pr—Pre-selective.
Pu—Pump.
RA—Radius arms.
SB—Spiral bevel.
SbH—Spiral bevel or hypoid.
SD—Single throat downdraft.
SDR—Spiral bevel, double reduction.
SG—Spur gear.
SH—Single throat horizontal.
Sp—Springs.
StB—Straight bevel.
ST—Single throat.
SU—Single throat updraft.
TA—Torque arm.
TaS—Torque arm and springs.
TP—Thermo syphon and pump
TS—Thermo syphon.
TT—Torque tube.
Up—Updraft.
V—"V" type.
Var—Various.
VS—Vertical shaft.
Wo—Worm.

New Literature

334. Spray Gun Booklet

De Vilbiss Co.: A new booklet, "Spray Gun Motion Study," has been published by this company.

The pamphlet includes a description and illustrations of the procedure in spraying various surfaces which are encountered in production spraying operations.

335. Hoist Bulletin

Coffing Hoist Company: A new eight-page bulletin on safety-pull ratchet-lever hoists is now available from this company.

This bulletin describes the entire line of ratchet-lever hoists, including both roller and

(*Continued on next page*)

New Products . . . . .

Continued from Page 85

coil-chain models. In addition to features, specifications, and special hooks, the bulletin illustrates the ratchet-pawl construction that eliminates friction brakes and the quick-disassembly feature of the coil-chain hoists. Action pictures of various hoist uses complete the information.

336. Coupling Bulletin

Titeflex, Inc.: A quick connect-disconnect hose coupling for water, oil, steam, gas and chemical lines is described in a bulletin just published by this company.

Entitled "Titeflex Quick-Seal Coupling," the 16-page booklet describes the simple construction of the coupling and points out how this construction provides sealing and full swiveling action.

337. Brake Guide

Wagner Electric Corporation: A new Hydraulic Brake Service Guide for use in brake service and brake repair is now available.

The booklet includes complete instructions for inspecting, flushing and bleeding the brake system. An outstanding feature is a trouble check chart which lists the common braking complaints with their causes, and instructions for their repair.

338. Steam Cleaner Bulletin

Turbo Machine Co.: A 4-page bulletin is offered on the new Spontane Steam Cleaner. The folder lists, and its illustrations show, the cleaner's applications, as well as the machine's speed and ease of operation. Specifications and maintenance suggestions are also included in the bulletin.

339. Brake Handbook

E. I. Du Pont: An 18-page factual handbook, "Give Your Customers The 'Brakes'," carries diagrams showing how hydraulic brakes work and is written in simple, non-technical language.

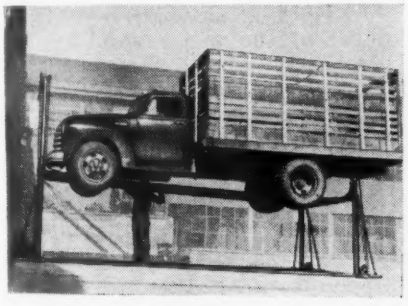
The handbook has sections on the importance of brake fluid, changes in automotive brake design, the danger of inferior fluids, characteristics of good fluid, how to check, drain, flush, refill and bleed systems together with additional practical information. The handbook also contains a list of brake fluid specifications.

New PRODUCTS SHOW WINDOW

FOR FURTHER INFORMATION USE POSTCARD FACING THIS PAGE

340. Car Hoist

Energy Farm Equipment Co.: The automotive hoist introduced by this company is "economical



and can be used in or moved to any location. This unit can raise 9000 pounds to full height in 55 seconds."

341. Distributor Wrench

Standard Motor Products, Inc.: This company has marketed a distributor terminal wrench for use on Chevrolet and GMC distributors for 1953 and 1954. A special wrench is needed to loosen the bolt holding the point set on these models. The case hardened tool is chromium plated.

342. Radiator Test Tank

Magnus Chemical Company, Inc.: The development of a new type radiator-leak testing tank; for efficient handling of automotive radiators including the larger trucks, bus and tractor models, has been announced.

The test and repair stand consists of a rugged tank provided with a work platform that is raised and lowered by compressed air. The platform and core can be rotated so leaks can be spotted and repaired without heavy manual labor by the operator.

343. Ammeter

Auto-Test, Inc.: A new combination ammeter and voltmeter is announced by this company. Anyone can check the complete electrical system of a car or truck in a few minutes, without disconnecting wires, the maker states. Primarily an ammeter, "Auto-Tong" has an overall length of 7⅜ in., a width of 4¾ in., is 1¾

in. thick and consists of a molded rubber case from which protrudes two steel tongs that form a yoke for encircling a wire when taking current readings.

344. Brake Shoe Grinder

Ammco Tools, Inc.: A brake shoe grinder manufactured by this company has a new shoe clamping assembly, which now permits grinding all shoes for drums 8″ through 17″ diameter.

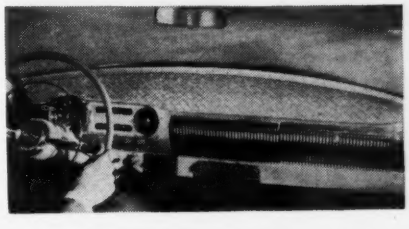
The company claims that the Safe-Arc eliminates the need for "wear-in" period and subsequent free adjustment on brake relining jobs. With the unit, an operator can, reportedly, grind a set of 8 shoes in less than 4 minutes; obtain 100% contact between lining surface and drum; yet need grind off only minimum lining material. A built-in vacuum system prevents flying dust.

345. Tread Gage

Hickok Electrical Instrument Co.: This new tire tread-wear gage is small enough to fit the palm of the hand so servicemen can "measure the amount of tire wear without removing tires from the car." A multiple scale is available to measure both standard and premium tires. The gage also has an instant reset mechanism.

346. Dash Pad

Cosmopolitan Enterprise: The new dash pad introduced by this company is said to kill sun glare and add a safety factor to the



front seat. The Cad-Pad can be installed or removed easily and it comes in a variety of colors.

(Continued on next page)

New Products . . . . . Continued from Page 87

347. Tire Machine

Stow Mfg. Co.: A new flexible shaft machine for working on tires is now being marketed by this company. The unit can be used for smoothing tires before patching, recapping and so on. According to the company, the tool is lightweight, maneuverable and transmits ½ hp at four different speeds.

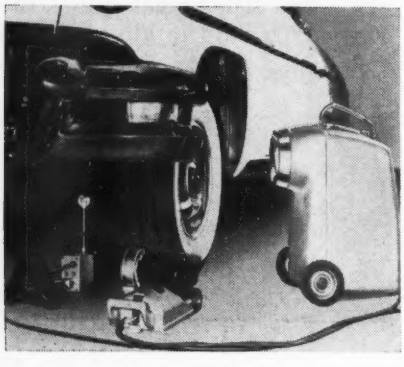
348. Hydraulic Line Kit

Flex-O-Tube Div. of Meridan Corp.: A new window lift, convertible top, and power seat adjustment kit which provides a coil of bulk hose and six different types of metal fittings for a wide variety of makes and models. The service man can cut the hose and install the fitting himself, the company says.

349. Electronic Balancer

Alemite Div., Stewart-Warner Corp.: A new, improved electronic wheel balancer, to eliminate unbalance "on the car," has been announced. The new balancer balances to precision both planes: (1) up and down motion of the wheel, (2) side to side motion of the wheel. Everything that rotates is balanced as a unit, and under all conditions of tire distortion caused by centrifugal force.

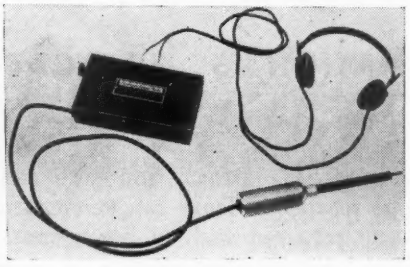
The unit balances both front and rear wheel assemblies on the vehicle in true operating position and at all driving speeds.



The basic balancer unit includes chassis, electronic dual-range meter and strobe light all mounted, in a portable cabinet, plus a vibration pick-up unit with 10 ft of cord, and 20 ft of power cord.

350. Sound Probe

Gel-Me Company: The electronic sound probe introduced by



this company is a scientific instrument which changes vibrations into electrical energy, multiplies sound volume and transmits directly into earphones. This electronic tool enables users to diagnose and locate trouble spots in any mechanically operating piece of equipment, the maker says. Through natural reproduction of noise at the source with no distortion, because all foreign or built-up sounds are absent, the operator is able to identify and locate the mechanical trouble.

351. Polishing Pad

Pit-Bar Mfg. Co.: A new polishing pad of 100 per cent wool yarn is said to outlast previous polishers 10 to 1. The pad has a 1 in. wool yarn pile, and a heavy canvas base with a triple ply canvas center hole. The pad is said to polish rain spouts, aerial bases, windshield wipers, eliminate line over metal trim, and will not grab, or unravel.

352. Air Conditioner

Spitzka Mfg. Co.: A new low-cost automobile air conditioner that the maker claims can be installed in 20 to 30 minutes by the average car owner, is now on the market. The Thermo-Cool Conditioner's maker claims that it costs nothing to operate because it requires no connection to the car's electrical system.

The cooler operates on a power take-off from the car's fan belt, transmitted by heavy duty pulley and oversize flexible cable, capable of maintaining a sustained load of 3 times greater than actual requirements.

An automatic clutch arrangement compensates for high driving speeds, delivering a uniform volume of air circulation at all times. A complete change of filtered, washed, cool air is provided every 30 seconds, according to the maker.

353. Radio Control

Motorola, Inc.: This company is adding volumatic control to its new line of car radios at no extra cost to the consumer. "The control automatically regulates the sound level of the audio amplifier and prevents the volume from fading when the car passes under bridges."

354. Brake Fluid Gage

Helms Industrial Development Co.: A gage devised to show the amount of hydraulic brake fluid in

a car has been introduced. Brak-Meter is installed on the top of the master cylinder. "No tools are needed for installation." The unit is filled with hydraulic fluid which provides a visual guide as well as a reservoir of fluid.

(*Continued on page* 104)

Terrific factory-assistance program is getting sensational results!

Summer sales soar for Studebaker dealers

They're selling more cars and trucks at a better profit than at any time this year!

STUDEBAKER
America's friendliest factory

Shop Kinks

TO MAKE A JOB EASIER ON CARS, TRUCKS AND IN THE SHOP

For The Best Kink Published Each Month $25

For All Kinks Published Each Month $7.50

If you have an original idea for a special tool, a short cut on a job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age.

If your Kink is used it may bring you seven-fifty or 25 dollars. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

Battery Syringe Used To Put Out Small Fires

When welding around a car, small fires are often started, such as from road oil or grease on a fitting, fender welt, and so on. I have found that a battery filler syringe in my water bucket will put out these small fires in a hurry, and even in places you can't reach. *C. E. Sharp, 200 Alabama, Mexico, Mo.*

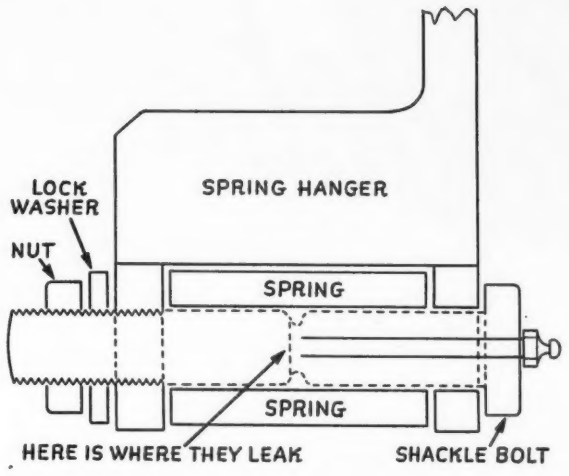
Rubber Band Used In Nash Camshaft Removal

To remove the camshaft on the Nash Ambassador, it is not necessary to remove the followers. Just push up the tappet followers, wipe off the excess oil and put a rubber band around each two followers to suspend them while the camshaft is being removed. *Thomas Kagi, 7807 N. Yale, Spokane, Wash.*

Filter Gasket Held In Place by Scotch Tape

We find that when replacing filter elements on Ford full-flow filters,

(*Continued on page* 92)



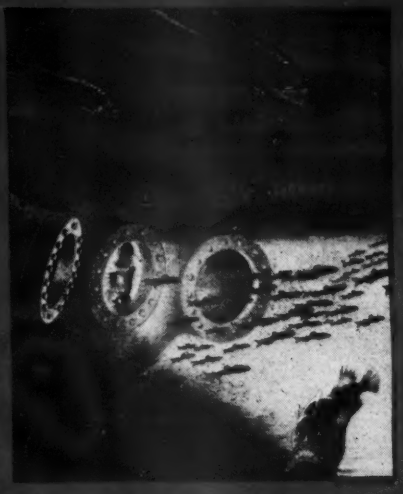
Spring Bolt Removal Made Easy

It is usually difficult to remove a broken bolt from the rear of the front spring on Chevrolet and GMC trucks. We've found a way to do the job that saves time and effort. First, we remove the nut and washer from the broken bolt. Then we grind the threads from the exposed end with a portable grinder. With vise-grip pliers, we turn the bolt into the spring past the threads and drive it out with a drift. *Louis Joerns, Bratzman & Melms, 841 Bellevue Ave., Elgin, Il.*

DID YOU KNOW

that in a car's engine...

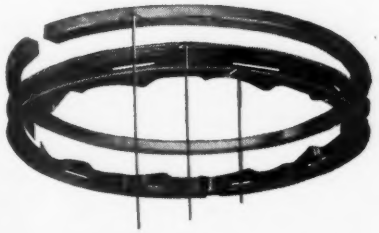
TEMPERATURE *during combustion reaches as much as 3 times the heat of molten lava?*



PRESSURE *in combustion chambers can be twice as great as water pressure at 100 fathoms?*

LUBRICATION *of cylinder walls may depend on an oil film only 1/10 as thick as a spider web?*

Only chrome plated piston rings can take this punishment without excessive wear!



Solid chrome plating on both top and bottom rings gives complete wear protection throughout entire area of ring travel. Rings are lapped in at factory, making tedious break-in unnecessary.

Old style piston rings, operating at the top of the cylinder, where heat is highest, pressure is greatest, and lubrication is poorest, can't give an engine the wear protection it needs.

But, in Perfect Circle's 2-in-1 Chrome Piston Ring Set, BOTH top compression and oil rings are plated with thick, solid chrome for *complete* wear protection... more than doubling cylinder, piston and ring life!

Assure your customers of thousands of extra miles of sustained power and lasting oil economy, by installing the *modern* piston ring set...Perfect Circle's 2-in-1 chrome set! Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Toronto.

Perfect Circle

2 in 1 chrome piston rings

The Standard of Comparison

Shop Kinks . . . . . Continued from Page 90

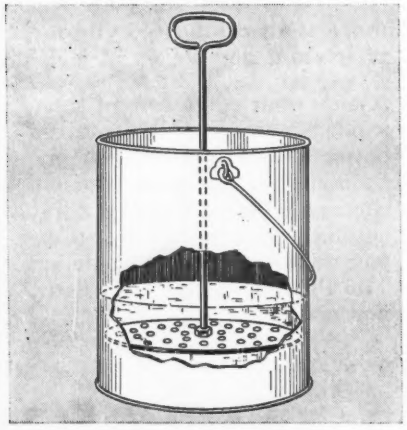
an easy way to keep the gasket from slipping out of place is to secure it with a little self-adhering tape. After all parts are cleaned, place a few pieces of tape around the gasket and stick it to the cover. This will keep the gasket tight and will aid in aligning the cover with the housing. *John George, 1101 Post Rd., George's Amoco Service Station, Norwood, R. I.*

Stalling Due to Sticking Interrupter Switch Solved

I have found a remedy for starting Chryslers that have stalled due to the interrupter switch sticking. The car occasionally stops with the lock-out pin in such a position as to have the interrupter switch in operation and thereby ground the ignition primary. We installed a switch in the line between the interrupter switch and the ignition primary on the distributor. *Gilbert B. Baldwin, 311 21st St. South, Great Falls, Mont.*

Handy Platform Speeds Bucket Cleaning of Parts

This handy gadget will have use in the fleet shop for tempering, cooling or washing small parts. It is used with a 5-gal paint or



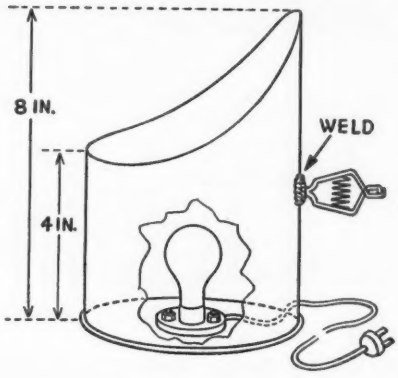
grease pail. Cut out a plate to the inside diameter of the pail and weld or bolt a handle to the center as shown, after drilling a number of holes in the plate. If this platform is placed in the bucket first, parts can be easily removed.

Installing Booster Pumps on Ford Engines

To install the late 8 CM manifold and a better fuel pump vacuum booster, which requires the larger push rod, don't rework the smaller Ford push rod. Just take a cape chisel and remove the bushing in the Ford block, then the larger push rod will work. All early Ford engine owners can use the booster pump by making this small change. *Thomas Kagi, 7807 N. Yale, Spokane, Wash.*

All Around Shop Light Made From 5 Quart Can

I make cheap, all 'round shop lights from 5-quart oil cans. Attach a base socket to the inside of



a can. Then install an extension cord through the hole and solder a battery clip to the long side of the can. This light will stand flat on the floor for work under the car. Clamp it to the cross plate at the front of the hood when working on top of an engine. For lights over the bench, make brackets of light wood and clamp the unit into place. *Glenn H. Feigh, 149 N. Leclaire Ave., Chicago 44, Ill.*

Handy Device to Locate Engine Miss

The tool I've made saves time in locating an engine miss and could eliminate the need for metal plug adapters. It is made from a 10-inch length of 3/16-inch steel welding rod, a 3-inch piece of 1-inch round wood stock, 5 feet of No. 12 gage wire, and one clip. First, drill a hole in the round stock, then, sharpen the rod to a point and insert it through the block (get a tight fit). Solder wire to the end of the steel rod and solder clip to the wire. To use this tool, ground it with the clip, then

insert the point of the steel rod into the plug insulation to short it out. This will spot the cylinders that are missing. *Andrew Foglia, Box 266, Neil Motor Co., Woodland, Wash.*

Old Steering Shaft Used to Support Engine

Here is a tool for holding a Chevrolet truck engine in position when removing the automatic transmission. Take an old steering shaft and cut off a 30-in. length. On the left side of the frame, at the rear front spring hanger, drill a 7/8-in. hole. Slide in the steering shaft between the oil pan and the bell housing and lay it on each side of the frame ledge.

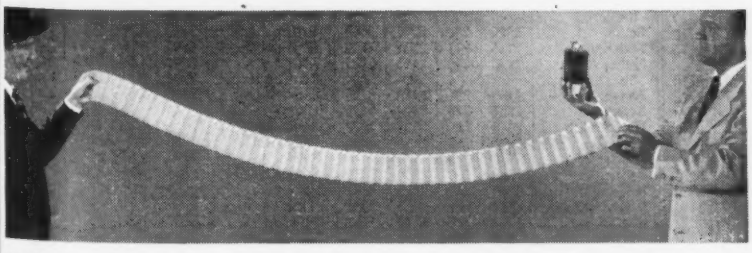
Removing Transmision From Ford Station Wagon

Here's the procedure I've found best for removing the transmission from a 1949 Ford station wagon with the X frame and overdrive, without removing the engine. First, take out the shaft; second, remove bolts from the transmission housing; third, disconnect the shifting linkage; fourth, remove all wires from the governor, kick down switch and solenoid; fifth, support the rear of the engine with a jack; sixth, pull the transmission back, pull a half turn so that the solenoid may be removed; seventh, drop the short crossmember; eighth, slide the transmission back and up into the X frame and let the front of the transmission come down. To install, reverse the process. *Rollie Norris & John Van Middlesworth, McDowell Motors, Inc., 18th at Belmont, Parsons, Kan.*

This one MoPar oil filter (and element) now fits 7 million cars...cuts inventories

Model of Car	MoPar "Thrift-Type" Oil Filter (#1123 152) and Micronic Oil Filter Element (#1121 694)
Plymouth	1934-1954
Dodge (6-cylinder)	1934-1954
De Soto (6-cylinder)	1934-1954
Chrysler (6-cylinder)	1934-1942

FIT ALL "SIXES". The chart above represents over 7 million Chrysler Corporation cars now on the road. And nearly every one is a prospect for the "Thrift-Type" Filter and replaceable Micronic Element.



THE 10 FEET of pleated material in each MoPar element gives over 8 *times* the filter surface area of ordinary-type filters. The filter is so fine that it stops abrasives as small as one micron (.000039 of an inch).

Engineered for all "Sixes" built by Chrysler Corporation. Easy for you to order, stock and sell!

Here is one of the hottest selling items in the replacement parts business — the MoPar "Thrift-Type" Oil Filter with replaceable Micronic Element.

It's designed to fit some 7 million 6-cylinder Plymouth, Dodge, De Soto, and Chrysler cars now equipped with the sealed-type oil filters. It's built and priced to sell easily. Just mention its many advantages and you've usually got a customer. You'll get repeat business, too, because the Micronic Element should be replaced every 5,000 miles.

MoPar filters and elements are easy to order and stock, require low investment because just one type fits so many cars. Order now from any Chrysler Corporation dealer or parts wholesaler.

And always install MoPar products on all Chrysler Corporation vehicles. The MoPar label is your assurance of parts and accessories that fit right, work right, last longer . . . bring you lasting customer satisfaction.

MoPar identifies thousands of official Chrysler Corporation parts and accessories. Display this sign!

PLYMOUTH · DODGE · DE SOTO · CHRYSLER
MOPAR
CHRYSLER CORPORATION ENGINEERED
PARTS
CHRYSLER CORPORATION · PARTS DIVISION

MOPAR

PARTS DIVISION
CHRYSLER CORPORATION
DETROIT 11, MICHIGAN

Current Passenger Car Price, Weight and Body Table

Following are prices at factory for cars with standard equipment as of June 29, 1954. State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight
BUICK				
Special 40				
Sedan, DeL., 2d	2010	197	2207	3690
Sedan, DeL., 4d	2064	201	2265	3735
Riviera Cpe.	2102	203	2305	3740
Conv. Cpe.	2343	220	2563	3810
Est. Wagon	2900	263	3163	3905
Century 60				
Sedan, DeL., 4d	2288	232	2520	3805
Riviera Cpe.	2301	233	2534	3795
Conv. Cpe.	2700	263	2963	3950
Est. Wagon	3172	298	3470	3975
Super 50				
Riviera Cpe.	2387	239	2626	4035
Riviera Sed., 4d.	2466	245	2711	4105
Conv. Cpe.	2701	263	2964	4145
Roadmstr. 70				
Riviera Sed., 4d	2971	298	3269	4250
Riviera Cpe.	3068	305	3373	4215
Conv. Cpe.	3205	316	3521	4355
Skylark 100				
Sports Conv.	4100	383	4483	4260
CADILLAC				
Series 62				
Coupe			3838	4347
Sedan			3933	4330
Convertible			4404	4598
Coupe De Ville			4261	4409
Eldorado			5738	4809
Series 60				
Sedan			4683	4490
Series 75				
Fltwd. Sedan			5875	5031
Fltwd. Imp.			6090	5093
CHEVROLET				
Special 1500-A				
Util. Sedan	1400	139	1539	3145
Sedan, 2d	1479	144	1623	3165
Sedan, 4d	1530	150	1680	3210
Station Wagon	1845	175	2020	3455
DeLuxe 2100				
Sedan, 2d	1564	153	1717	3185
Sedan, 4d	1615	156	1771	3230
Delray Coupe	1625	157	1782	3185
Station Wagon	1950	183	2133	3470
Bel Air 2400				
Sedan, 2d	1669	161	1830	3220
Sedan, 4d	1720	164	1884	3255
Sport Coupe	1883	178	2061	3300
Convertible	1998	187	2185	3445
Station Wagon	2090	193	2283	3540
Corvette 2900				
Convertible	3250	273	3523	2705
CHRYSLER‡				
Wind. DeL. 6				
Club Coupe	2330	181	2511	3565
Sedan, 4d, 6p	2350	182	2532	3655
Newport	2600	201	2801	3685
Conv. Coupe	2800	216	3016	3915
Twn. & Cty.	3056	235	3291	3955
Sedan, 4d, 8p	3215	247	3462	4185
New Yorker 8				
Club Coupe	2940	227	3167	3910
Sedan, 4d, 6p	2965	229	3194	3970
Newport	3220	248	3468	4005
Conv. Coupe	2800	216	3016	3915
Twn. & Cty.	3056	235	3291	3955
Sedan, 4d, 8p	3215	247	3462	4185
N. Y. DeL. 8				
Club Coupe	3130	241	3371	4005
Sedan, 4d, 6p	3155	243	3398	4065
Newport	3410	262	3672	4095
Conv. Coupe	3625	278	3903	4265
Cust. Imp. 8				
Sedan, 4d, 6p	3925	300	4225	4355
Newport	4205	320	4525	4345
Town Limos'n	4425	337	4762	4480
Crown Imp. 8				
Sedan, 4d, 8p	6406	466	6872	
Limousine, 8p	6520	474	6994	5255
DE SOTO‡				
Powermaster 6				
Club Coupe	2166	168	2334	3505
Sedan, 4d, 6p	2186	170	2356	3570
Stat. Wagon	2857	221	3078	3855
Sedan, 4d, 8p	3018	233	3251	4120
Firedome 8				
Club Coupe	2433	188	2621	3735
Sedan, 4d, 6p	2453	190	2643	3790
Sportsman	2685	207	2892	3815
Conv. Coupe	2891	223	3114	4015
Stat. Wagon	3111	240	3351	4045
Sedan, 8p	3276	253	3529	4305
DODGE‡				
Mdowbrk. 6				
Club Coupe	1816	142	1958	3125
Sedan, 4d	1855	145	2000	3170
Coronet 6				
Club Coupe	1933	151	2084	3165
Sedan, 4d	1958	153	2111	3235
Suburban	2044	160	2204	3185
Sierra, 2 seat				3430
Sierra, 3 seat				3435
Mdowbrk. 8				
Club Coupe	1975	154	2129	3320
Sedan, 4d	1995	156	2151	3375
Coronet 8				
Club Coupe	2039	159	2198	3345
Sedan, 4d	2059	161	2220	3405
Sport Coupe	2185	170	2355	3310
Conv. Coupe	2309	180	2489	3505
Suburban	2312	180	2492	3400
Sierra, 2 seat				3605
Sierra, 3 seat				3660
Royal 8				
Club Coupe	2156	168	2324	3365
Sedan, 4d	2178	170	2348	3425
Sport Coupe	2299	179	2478	3355
Conv. Coupe	2419	188	2607	3575
FORD				
Mainline 6				
Business Cpe.	1400			3021
Tudor Sedan	1496			3086
Fordor Sedan	1542			3142
Ranch Wagon	1846			3338
Customline 6				
Tudor Sedan	1582			3099
Club Coupe	1591			3080
Fordor Sedan	1628			3155
Ranch Wagon	1932			3344
Country Sedan	2006			3513
Crestline 6				
Fordor Sedan	1726			3159
Victoria	1870			3184
Sunliner	1972			3231
Skyliner	1972			3204
Country Squire	2133			3563
Mainliner 8				
Business Cpe.	1471			3142
Tudor Sedan	1567			3207
Fordor Sedan	1613			3263
Ranch Wagon	1917			3459
Customline 8				
Tudor Sedan	1653			3220
Club Coupe	1662			3201
Fordor Sedan	1699			3276
Ranch Wagon	2003			3465
Country Sedan	2077			3634
Crestline 8				
Fordor Sedan	1797			3280
Victoria	1941			3305
Sunliner	2043			3352
Skyliner	2043			3325
Country Squire	2204			3684
HENRY J				
Corsair				
Sedan, 2d	1286	118	1404	2395
DeL. Sed., 2d	1437	129	1566	2445
HUDSON—Jet				
Club Sedan	1465	156	1621	2635
Sedan, 2d	1665	172	1837	2715
Sedan, 4d	1685	173	1858	2675
Super Jet				
Club Sedan	1755	178	1933	2710
Sedan, 4d	1775	179	1954	2725
Jet-Liner				
Club Sedan	1860	186	2046	NA
Sedan, 4d	1870	187	2057	2760
Wasp				
Club Sedan	2013	196	2209	3375
Club Coupe	2056	200	2256	3360
Sedan, 4d	2056	200	2256	3440
Super Wasp				
Club Sedan	2203	210	2413	3490
Club Coupe	2252	214	2466	3475
Sedan, 4d	2252	214	2466	3525
Hollywood	2473	231	2704	NA
Conv. Brghm.	NA	NA	NA	NA
Hornet Spec.				
Club Sedan	2345	226	2571	3515
Club Coupe	2390	229	2619	3505
Sedan, 4d	2390	229	2619	3650
Hornet				
Club Coupe	2505	237	2742	3570
Sedan, 4d	2530	239	2769	3620
Hollywood	2733	255	2988	NA
Conv. Brghm.	NA	NA	NA	NA
KAISER				
Special				
Club Sedan	2141	193	2334	
Sedan, 4d	2192	197	2389	3210
Manhattan				
Club Sedan	2404	213	2617	
Sedan, 4d	2453	217	2670	3375
Darrin	3388	300	3688	
LINCOLN				
Cosmopolitan				
Sedan, 4d	3226			4190
Sport Coupe	3322			4250
Capri				
Sedan, 4d	3402			4245
Hardtop	3549			4250
Convertible	3699			4450
MERCURY				
Custom				
Sedan, 2d	2004			3435
Sedan, 4d	2057			3480
Sport Coupe	2117			3485
Monterey				
Sedan, 4d	2133			3515
Coupe	2244			3520
Sun Valley	2365			3535
Convertible	2390			3620
Station Wagon	2545			3735
NASH				
Metropolitan				
Hardtop*	1330	115	1445	
Convertible*	1353	116	1469	
Rambler				
Deluxe				
Club Sedan, 2d	1414	136	1550	
Super				
Club Sedan, 2d	1553	147	1700	
Sedan, 4d	1641	154	1795	
Suburban, 2d	1646	154	1800	2555
C'try Club, 2d	1646	154	1800	
Custom				
Stat. Wag., 2d	1787	163	1950	2570
C'try Club, 2d	1787	163	1950	2550
Sedan, 4d	1802	163	1965	2665
Conv. Sed., 2d	1817	163	1980	2590
Cross C'try, 4d	1880	170	2050	
Statesman				
Super				
Sedan, 2d	1929	181	2110	3025
Sedan, 4d	1977	181	2158	3045
Custom				
Sedan, 4d	2139	193	2332	3070
C'try Club, 2d	2223	200	2423	3095
Ambassador				
Super				
Sedan, 2d	2163	202	2365	3410
Sedan, 4d	2215	202	2417	3430
Custom				
Sedan, 4d	2384	216	2600	3480
C'try Club, 2d	2510	225	2735	3550
OLDSMOBILE				
Series 88				
Sedan, 2d	2066	206	2272	3699
Sedan, 4d	2126	211	2337	3719
Holiday Cpe.	2230	219	2449	3721
Super 88				
Sedan, 2d	2189	221	2410	3729
Sedan, 4d	2252	225	2477	3780
DeL. Holiday	2448	240	2688	3775
Conv. Cpe.	2615	253	2868	4003
Series 98				
Sedan, 4d	2552	254	2806	3895
Holiday Cpe.	2570	256	2826	3851
DeL. Holiday	2771	271	3042	3938
Conv. Cpe.	2963	286	3249	4193
PACKARD				
Clipper				
Special				
Club Sedan, 2d	2332	212	2544	3685
Sedan, 4d	2378	216	2594	3650
De Luxe				
Club Sedan, 2d	2426	219	2645	3590
Sedan, 4d	2472	223	2695	3660
Sportster	2598	232	2830	3595
Super				
Club Sedan, 2d	2537	228	2765	3610
Sedan, 4d	2584	231	2815	3695
Coupe	2872	253	3125	3750
PACKARD (Continued)				
Packard				
Sedan, 4d	3068	276	3344	3955
Coupe	3517	310	3827	4065
Patrician, 4d	3575	315	3890	4190
Conv. Cpe.	3618	317	3935	4290
Sedan, 8p	5175	525	5610	4650
Limousine	5500	550	5960	4720
Caribbean	5632	468	6100	4660
PLYMOUTH‡				
Plaza				
Bus. Coupe	1480	118	1598	2889
Club Sedan	1582	125	1707	2943
Sedan, 4d	1617	128	1745	3004
Suburban	1895	149	2044	3122
Savoy				
Club Sedan	1682	133	1815	2986
Club Coupe	1689	134	1823	2982
Sedan, 4d	1717	136	1853	3036
Belvedere				
Sedan, 4d	1792	141	1933	3050
Sport Coupe	1970	155	2125	3038
Suburban	2103	165	2268	3186
Conv. Coupe	2115	166	2281	3273
PONTIAC				
Chieftain 6				
Spec. Sedan, 2d	1788	182	1968	3331
Spec. Sedan, 4d	1843	184	2027	3391
DeL. Sedan, 2d	1885	187	2072	3351
DeL. Sedan, 4d	1940	191	2131	3408
DeL. Catalina	2112	204	2316	3421
Spec.St.Wg.,2st	2156	208	2364	3601
Cus. Catalina	2174	208	2382	3421
Spec.St.Wg.,3st	2207	212	2419	3691
DeL.St.Wg.,2 st	2286	218	2504	3646
Chieftain 8				
Spec. Sedan, 2d	1858	185	2043	3396
Spec. Sedan, 4d	1913	189	2102	3451
DeL. Sedan, 2d	1955	193	2148	3416
DeL. Sedan, 4d	2010	196	2206	3486
DeL. Catalina	2182	210	2392	3491
Spec.St.Wg.,2st	2226	213	2439	3676
Cus. Catalina	2244	214	2458	3491
Spec.St.Wg.,3st	2277	217	2494	3771
DeL.St.Wg.,2st	2356	223	2579	3716
Star Chief 8				
DeL. Sedan, 4d	2097	204	2301	3536
Cus. Sedan, 4d	2184	210	2394	3536
Cus. Catalina	2335	222	2557	3551
DeL. Conv. Cpe.	2403	227	2630	3776
STUDEBAKER				
Champion				
Custom				
Sedan, 2d	1595	163	1758	2725
Sedan, 4d	1635	166	1801	2745
De Luxe				
Sedan, 2d	1705	170	1875	2730
Sedan, 4d	1745	173	1918	2765
Starlight Cpe.	1795	177	1972	2740
Conestoga	1995	192	2187	2930
Regal				
Sedan, 2d	1805	178	1983	2745
Sedan, 4d	1845	181	2026	2780
Starlight Cpe.	1895	185	2080	2750
Starliner	2045	196	2241	2825
Conestoga	2095	200	2295	2950
Land Cruiser	2315	218	2533	3210
Commander				
De Luxe				
Sedan, 2d	1940	196	2136	3075
Sedan, 4d	1980	199	2179	3105
Starlight Cpe.	2030	203	2233	3085
Conestoga	2230	218	2448	3265
Regal				
Sedan, 4d	2080	207	2287	3120
Starlight Cpe.	2130	211	2341	3095
Land Cruiser	2220	218	2438	3180
Starliner	2280	222	2502	3175
Conestoga	2330	226	2556	3265
WILLYS				
Aero Lark				
Sedan, 2d	1589	148	1737	
Sedan, 4d	1689	154	1823	2661
Aero Ace				
Sedan, 2d	1735	157	1892	2751
Sedan, 4d	1805	163	1968	2778
Aero Eagle				
Hardtop	1990	177	2167	2647

‡ Prices do not include delivery and handling charges. NA—Not available. * F.O.B. coastal port of entry.

These big beautiful full-color ads

in LIFE and POST

can mean extra money in your pocket

Right now Libbey·Owens·Ford is telling *your* prospective customers about the wonderful advantages of E-Z-Eye Safety *Plate* Glass.

Telling them and *showing* them—by ads illustrated with actual color photographs taken right through the E-Z-Eye windshields. The reader can sit in the driver's seat and *see* how E-Z-Eye cuts down glare . . . see how it brings out with new clarity the colors and details of the scene ahead.

And, supplementary illustrations show how E-Z-Eye cuts down on incoming solar radiation to help keep the car interior cooler in summer.

People want E-Z-Eye. More and more of them *will be* wanting it Already, over 2,000,000 E-Z-Eye windshields have been sold. Every one of them has meant extra profit to a dealer and extra commission to an alert salesman.

Be sure your cars on the floor have E-Z-Eye . . . it's extra money in your pocket!

LIBBEY·OWENS·FORD GLASS CO. • TOLEDO, OHIO

E-Z-EYE SAFETY PLATE

with the shaded windshield

Reduces Glare, Eyestrain, Sun Heat

E-Z-Eye SAFETY PLATE

Equipment Care

. . . Continued from Page 41

who are operating them.

LIFTS—Because automobile lifts are simple and ruggedly built units, they require only limited care and attention. Nevertheless, like other mechanical equipment, they must have periodic inspection and maintenance. They should be checked regularly for correct oil level and proper quality of oil. Shortage of oil and improper quality of oils are the most common causes of lift troubles. In fact, manufacturers stress that "under no circumstances should you use your lift without a full supply of oil in the tank." Never use flushing oils, cutting oils, kerosene, fuel oil or crankcase drainings, since such oils lack the proper lubricating qualities and tend to deteriorate packings. Manufacturers usually list the type of oil, or its equivalent, required for efficient operation of your lift. It is advisable that these recommendations be posted in the shop. Lifts should be cleaned thoroughly at regular intervals, whether or not repairs or replacements are needed.

PAINT FINISHING — Infrared equipment for automotive repair shops consists for the most part of portable panels, "traveling" ovens and stationary, totally-enclosed production ovens. Because generally they have no moving parts, such equipment is as nearly maintenance-free as any shop equipment can be. If you have a traveling oven which incorporates an automatic oil-lubricated transmission, the oil in the transmission should be changed 30 days after the unit has been put into operation and about every six months after that.

"He promised to grease his palm if he speeded up the job."

Lamps in units of varying wattage should always be replaced with lamps of the same wattage in order to provide even paint film temperatures over the entire surface of a vehicle being baked. Clean reflectors, manufacturers point out, are essential for top performance of the equipment, although it should not be necessary to clean them more often than once every 60 or 90 days. A lacquer thinner, a combination of thinner and water or any non-

(*Continued on page* 98)

Here's how to get more **FORDS** to come your way!

Just mail the coupon below! It brings you the sign that attracts Fords!

FORD OWNERS look for Genuine Ford Parts whenever they have repairs done. With a Genuine Ford Parts Oval outside your shop to tell Ford owners you're set up to take care of their special needs, they'll be more certain to give you their business.

Year 'round advertising in LIFE, SATURDAY EVENING POST, COLLIER'S, LOOK, TRUE, and Mechanical and Farm magazines tells Ford owners continuously why Genuine Ford Parts are best for Fords. This advertising hits home to millions of Ford owners, and you can make it work for *you*, too!

And remember—*your* "stock" of Genuine Ford Parts is as near as your nearest Ford Dealer.

So mail us this coupon. We'll let you know how easy it is to have a Genuine Ford Parts sign.

MAIL THIS COUPON NOW!

PARTS AND SERVICE SALES DEPARTMENT
Ford Division, Ford Motor Company, Box 658, Dearborn, Mich.

Please send me complete information telling me how independent garages can get a Genuine Ford Parts sign. I'd like to cash in on this, too!

FIRM NAME_____

INDIVIDUAL'S NAME_____

ADDRESS_____

CITY_____ STATE_____

H

Equipment Care . . . Continued from Page 96

abrasive polish, are recommended for this purpose.

WELDERS—The following preventative maintenance inspection should be performed once a month. It is based on the assumption of average operating conditions.

Blow out and clean entire unit, and inspect and adjust brushes on both exciter and main generator commutators. Clean armature, commutator and starter contacts. Examine bearings and grease at proper intervals and check all external electrical connections and condition of welding cables. Check machine for proper welding operation and control of current range.

As a final check of proper operation, an arc should be struck with the controls set at minimum and the current output checked with a meter tong. The welder should also be set at maximum and a reading taken. An electrode should be run off without interrupting the arc to check for arc stability and other welding characteristics. If a meter is not available, the output of the welder may be checked by measuring the inches of electrode melted off in one minute of welding. This melt-off rate as measured can be compared with charts available in procedure handbooks and from electrode makers. While it is only approximate, it is a satisfactory preventative maintenance check.

HYDRAULIC JACKS — Just as in the case of automobile lifts, jacks are temperamental about the type of oil you use in them. More hydraulic jacks are ruined by filling them with brake fluid, dirty crankcase drainings and other harmful fluids than any other cause. You'll save money by sticking to jack oil as recommended by various jack manufacturers.

Keep all working parts thoroughly lubricated. Oil should be placed regularly in the oil hole at the base of the lifting arm, in the cross head, handle pivot and foot pedal. Packing nuts at the piston and pump plunger should be kept moderately tight to prevent leakage. Oil should be drained periodically and the jack thoroughly flushed with naphtha.

Since major service repair procedures may vary with different manufacturers of automotive shop equipment, owners should place the name and address of their nearest authorized field service station in a conspicuous location, so that inoperative equipment can be immediately forwarded for repairs without delay. Where the authorized field service system is employed by manufacturers, owners can obtain much faster service, frequently at lower expenses, by dealing directly with them.

School buses account for about 70 per cent of annual U. S. bus output.

NEW Black & Decker Sander-Grinder has 90% MORE POWER

to Sand, to Grind, to Cut, to Brush!

Black & Decker's new 7-inch Heavy-Duty Sander-Grinder has almost *twice* the power of any previous model! Yet it's *lighter*, cuts down operator fatigue! Greater power and higher spindle speeds—your choice of 5,200 or 6,000 rpm—make it a more nearly *universal* tool in your shop, for dependable, heavy-duty operation. The B&D-built universal motor, specially designed just for this tool, guarantees ideal results on even your toughest jobs! Motor housing is protected from even abnormal abuse, and is contoured to direct exhaust air *away* from the operator! Switch-guarded against accidental operation; ball bearings lubricant-sealed. Complete with pad, three sanding discs, all ready to *go*, for only $79.50! To get set for faster schedules, greater output per tool on higher profit fender and body jobs, see the new B&D Sander-Grinder at your jobber's today, or write for *Free* Form Number 27. Address: THE BLACK & DECKER MFG. CO., Dept. 620, Towson 4, Md.

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker

PORTABLE ELECTRIC TOOLS

For nearest distributor, see "Tools-Electric."

Do all these jobs FASTER, BETTER, CHEAPER!

Get fast material removal or satin-smooth finish on automotive body and fender jobs!

With saucer or cup grinding wheel, smooth down welds, cut off studs, bolts, rivets, etc.!

Clean surfaces, remove old paint, rust, scale, dirt *quickly* and *easily* with a wire-cup brush!

Use for driving depressed center abrasive wheels to remove burrs, torch cuts, sheared edges, etc.!

G. M. Windshield . . . Continued from Page 51

molding screws, shown at "A" in Figure 1. Inside of the body, under the lip of the windshield rubber channel at both upper and lower corners, remove the side reveal molding nuts, shown at "B" and "C" in Figure 1 and remove the right and left side reveal moldings.

Under the instrument panel remove the nut and washer indicated at "D" in Figure 1 from both sides of the cowl panel. On top of the cowl, with suitable tool, snap off the windshield lower reveal molding center escutcheon and loosen the molding clip "E" located under the escutcheon, as shown in Figure 2.

Then, pull either the right or left lower reveal molding toward the corresponding side of the body and away from the rubber channel, so as to slide the "L" flange section of the molding from the rubber channel. (See Figure 3.) Repeat this operation on the opposite side. With a putty knife, carefully loosen the seal between the rubber channel and the pinchweld flange completely around the perimeter of the rubber channel. Then, with the aid of a helper, start at either inside upper corner and with the palm of the hand push the windshield assembly outward along the top and sides to free the rubber channel from the body pinchweld flange. Then disengage the assembly from the lower pinchweld flange and remove it from the body.

Place the windshield assembly on a protected bench and remove the upper reveal molding from the rubber channel and the rubber channel from the glass. Note: the foregoing procedure applies to the early production bodies. Later models have a slide-on clip on the outside of the body at "C" (Figure 1) in place of the bolt type clip and slide-on clips in place of the "L" flanges.

Installation

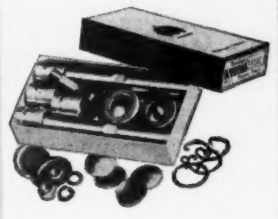
Production sealer used between the rubber channel and the pinchweld flange is a neutral color rubber base sealer of plastic consistency and is not now available for service purposes. Therefore, in the replacement of a windshield use a medium bodied sealer to seal between the rubber channel and the pinchweld flange. For sealing the lip of the rubber channel to the glass, use weatherstrip cement.

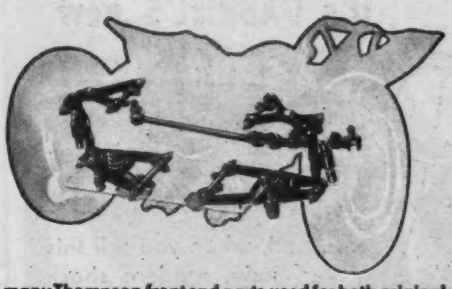
About 65 per cent of U. S. families own automobiles.

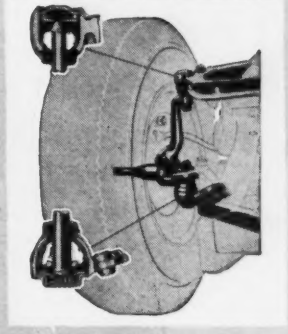
Clean off the old sealer from the windshield body opening and rubber channel. Before proceeding with the installation, check and correct the following conditions: (A) unevenness or high spots in the pinchweld flange; (B) obstruction in the windshield drain gutter and drain hoses (see Figure 4).

(*Continued on page* 102)

"There's nothing like getting your money's worth!"







The many Thompson front end parts used for both original equipment and replacement, include Thompson's revolutionary front suspension ball joints, called "the greatest advance in front suspension in 20 years." These parts will soon be available through your Thompson Products jobber for servicing those cars on which they are used as original equipment.

MAKE YOUR TP JOBBER YOUR "FRONT END PARTS HEADQUARTERS!"

YOU can't go wrong when replacing with Thompson Front End Parts . . . specified as *original equipment* by America's top automotive manufacturers.

Whether you work on cars, trucks, buses or tractors . . . your customers will be getting finest-quality "original equipment" precision parts. *They* get top value for their money . . . *you* get more satisfied customers. And that's as good as money in the bank!

Protect your reputation as a first-class repairman by specializing in replacement with Thompson Front End Parts . . . the best in the world by far!

See your Thompson Products Jobber

DOMESTIC SERVICE SALES
2209 Ashland Road • Cleveland 3, Ohio

G. M. Windshield . . . Continued from Page 100

Locate and mark the bottom and top center of the windshield glass and rubber channel. Install rubber channel completely around the glass and center, according to mark. Locate and mark the center of the windshield upper reveal molding. Install the upper reveal molding to the rubber channel and center, according to the mark. (A mild soap solution applied in the reveal molding groove of the rubber channel will facilitate installation of the moldings.)

Insert a piece of strong cord into the pinchweld cavity of the rubber channel completely around the windshield and tape the loose ends to the inside surface of the glass at the bottom center; as shown in Figure 5.

Before placing the windshield in the opening, apply a ribbon of medium-bodied sealer completely around the base of the rubber channel as indicated at (1) in Figure 6. After the windshield is installed, the lip of the rubber channel is sealed to the glass, as indicated by arrows "2" in Figure 6.

Place the complete windshield assembly into the windshield opening. Note: accurately center the glass and the rubber channel in the opening. Then, while pressing firmly inward and downward on the outside of the glass, have a helper on the inside of the body pull the cord, as shown in Figure 7, across the bottom, up the sides and across the top of the rubber channel over the pinchweld flange. Inspect all areas of assemblies for proper installation.

Using weatherstrip cement in a sealing gun, seal between the outside lip of the rubber channel and the glass, as shown in Figure 8. Clean up the excess sealer and make sure that the sealer is not obstructing the drain gutter or the drain hose opening. Then install the windshield lower and side reveal molding, garnish moldings and remaining hardware.

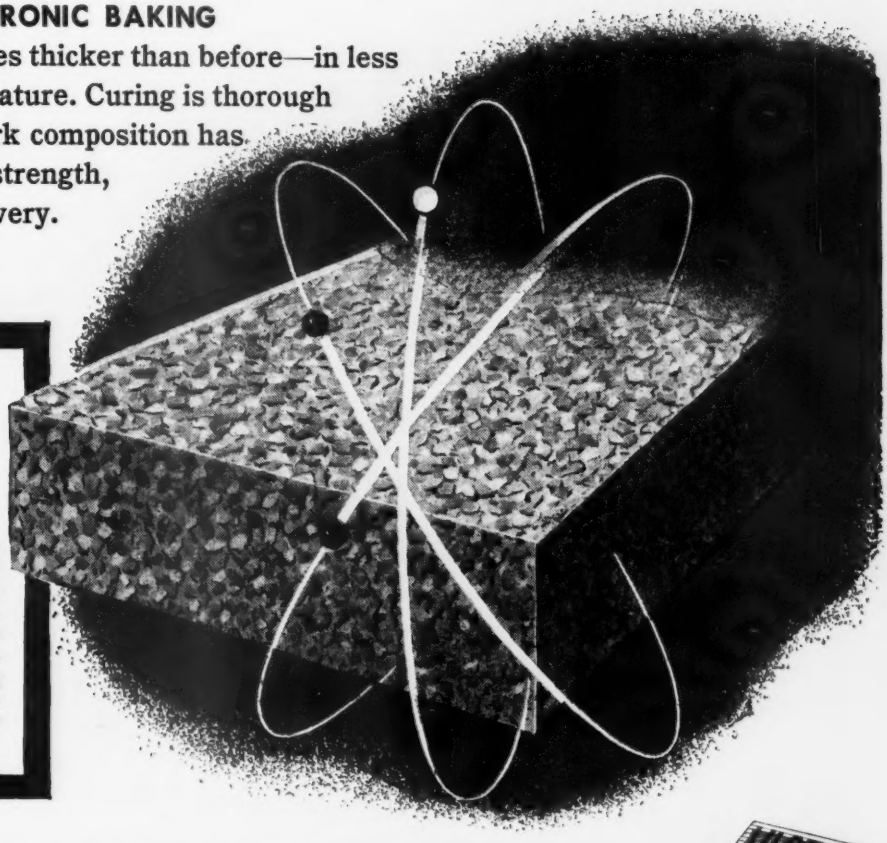
Before installing the windshield lower reveal moldings, apply a mild soap solution in the reveal molding grooves of the rubber channel to facilitate installation of the molding.

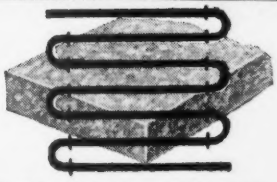
Illustrations and information courtesy of Libbey-Owens-Ford Glass Co.

How electronically baked cork makes better gaskets

ONLY Armstrong-Victor HAS THIS NEW PROCESS

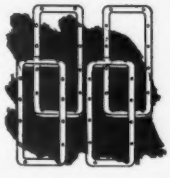
NEW HIGH-FREQUENCY ELECTRONIC BAKING cures a 9-inch thick mat—3 times thicker than before—in less than 5 minutes, at lower temperature. Curing is thorough and uniform inside and out. Cork composition has more uniform density, tensile strength, range of compression and recovery. Color is lighter and brighter.





OLD-FASHIONED BAKING with steam coils took hours to cure a 3-inch thick cork composition mat used to make gaskets. Results were uncertain. Too often, the cork was under-cured on the inside—or over-cured on the outside. This caused widely varying density—loss of strength—reduced compression-recovery range—and poor color.

Means Better On-the-Job Values in A-V Gaskets



UNIFORM DENSITY of cork composition means gaskets are uniformly strong in every square inch . . . have better compression and recovery values . . . and thus have more "live" and lasting sealing power.

UNIFORM STRENGTH of cork composition means that A-V gaskets take shop handling without harm—are more flexible—fit better—are less likely to crack or break. They're die cut sharp and clean with round holes and straight sides.

UNIFORM COMPRESSIBILITY and recovery means that A-V cork gaskets help you make and hold a tighter seal longer than gaskets made from steam-cured cork. Tests show almost 100% uniformity of recovery.

FACTORY-FRESH TO YOU . . . in sealed, protective packages . . . the world's most complete gasket line . . . stocked by Victor Jobbers everywhere. Sold in sets or individual parts . . . for every make and model. Victor Mfg. & Gasket Co., P.O. Box 1333, Chicago 90, Illinois.

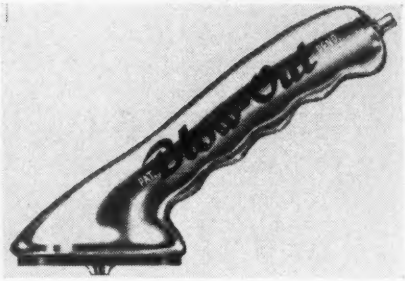
Only genuine Armstrong-Victor Replacement Cork Gaskets have this exclusive trade-mark—the 2 notches.

Armstrong-Victor

New Products . . . . . Continued from Page 88

355. Gas Line Cleaner

Tula Mfg. Co.: This company has introduced a new tool for blowing out dirty, clogged or frozen gas lines. Blow-out is placed over the gas tank filler pipe and an air hose is applied to the other end. This procedure, the manufacturer states, will clear the lines. It is said that the metal unit can also be used in the same way on radiators and motor blocks.



356. Service Jack

Hein-Werner Corp.: "Contact and up in less than a minute" is a feature claimed for the new hydraulic service jack introduced by this company. "The '55' is hydraulic, requires no air lines, and can be used anywhere." It has twin saddles that grip under the bumper and will raise the front or rear end of the car or truck.

357. Degreasing Gun

Currier Company: A newly improved vapor degreasing gun, and solvent, provide an automatic method for removing old lubrication oil and sludge from differential, transmission and overdrive units, according to this company.

The gun vaporizes solvent, which in turn loosens deposits in the gear housing, leaving the gears dry and ready for new lube. It is fully automatic, shutting itself off after a nine-minute cleaning cycle, according to the maker.

"Now don't bother your father! He's had a hard day at the office."

358. Arc Welder

Harnischfeger Corp.: A new development in arc welders is announced by this corporation. The P & H model DA-200 in a single machine provides both AC and DC welding. A flip of the switch gives the desired welding current. It's possible to change from

(*Continued on page* 110)

put SPEED on the job... with

*Snap-on double offset BOXOCKETS!

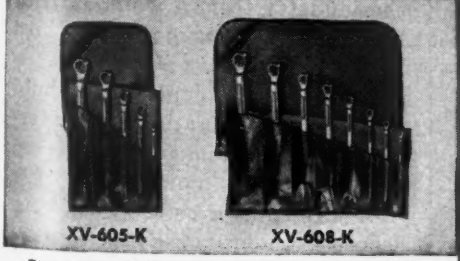
OVER A WIDE, wide range of jobs no other type of wrench can match Snap-on Boxockets for handiness, speed, safety! They swiftly handle jobs where sockets can't be used—slip into recesses and over protruding bolts. The deeply offset, angled heads give you knuckle-saving clearance. The double hex openings completely encircle the nut—grip securely on all six corners—*can't* slip—*can't* spread—need only *half* the turning space in tight spots. You can take a new grip with only a 30° handle swing!

Boxocket advantages can contribute to any mechanic's earning power—that's why Snap-on offers them in a wide selection of types and sizes—Standard and Heavy Duty—Dwarf and Midget—15% Angle and Combination. Let your Snap-on Man show you the next time he calls! Ask him for the free Snap-on catalog, or write

SNAP-ON TOOLS CORPORATION
8036-G 28th Avenue Kenosha, Wisconsin

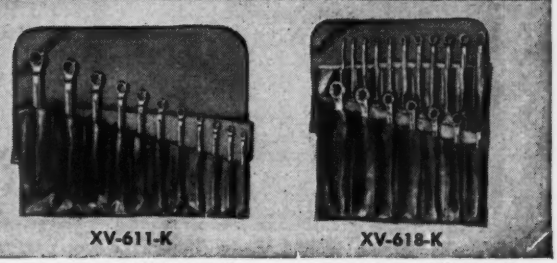
*Snap-on is the trademark of Snap-on Tools Corporation.

NEW CHEVROLET AND PONTIAC "SPECIALS"
Real time savers and money makers for many operations on Chevrolets and Pontiacs. Ask your Snap-on Man to show you.



XV-605-K XV-608-K

5 wrenches, 3/8" to 1". 6 wrenches, 3/8" to 1 1/4".



XV-611-K XV-618-K

11 wrenches, 3/8" to 1 1/4". 18 wrenches, 3/8" to 1 5/8".

Power Mowers . . . .

Continued from Page 47

reputations within their communities, which is a big step forward in opening a new business.

The power mower business, although just an infant, "sneaked up" on us when we weren't looking, and in the past five years it has become a giant. Let's welcome this giant into the automotive industry, help it to grow and let it help us.

"I couldn't believe it when I heard you were in the hospital. Why, only last night I saw you dancing with a pretty blonde."
"So did my wife."
"Exhaust"

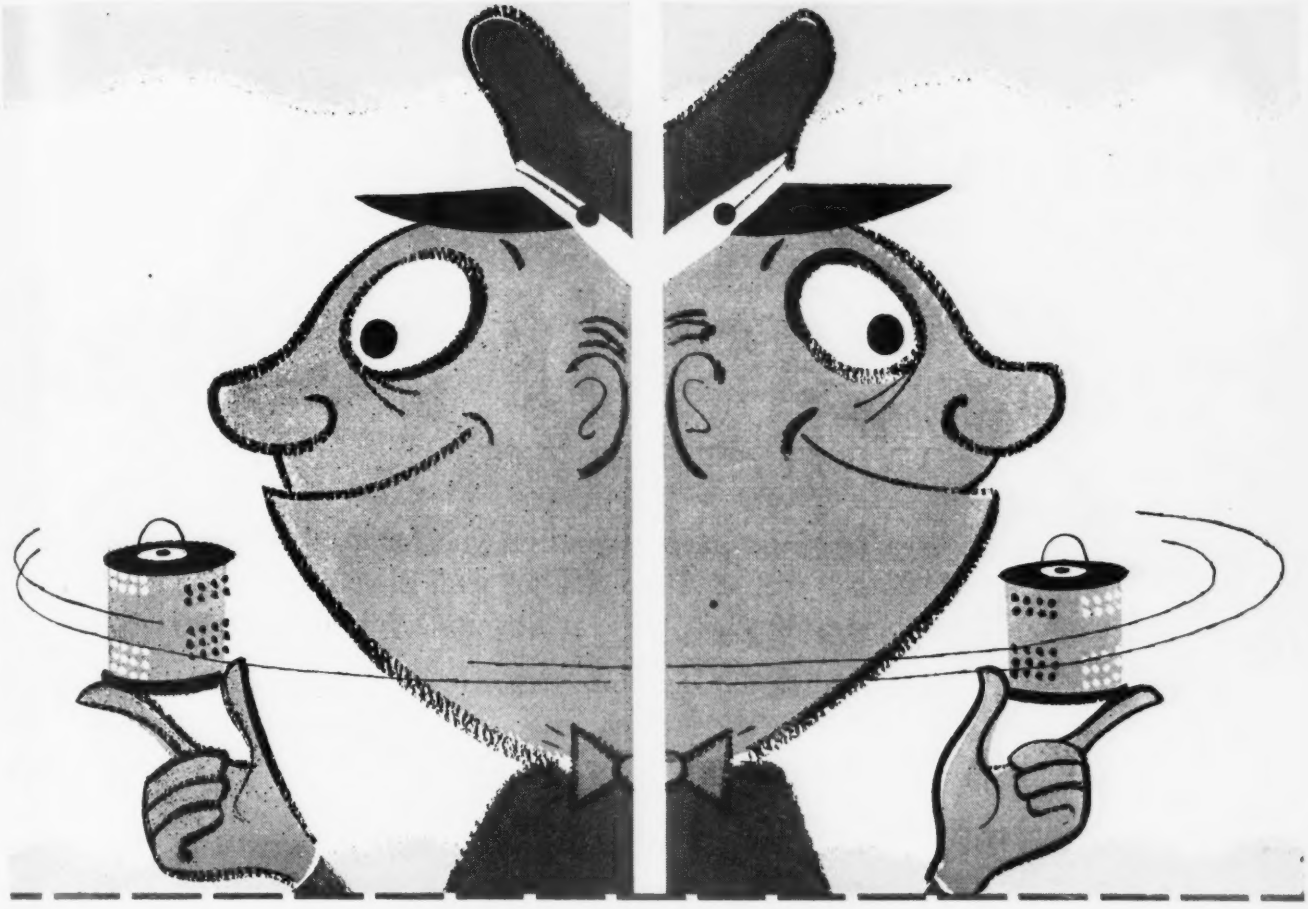
2.7 million car sales in first half

The automobile business enters the hot weather slowdown season with a show of confidence. Despite gloomy talk that sales were headed for a decline following the spring peak in May, a spurt in sales during June brought new encouragement to the industry.

Automobile sales figures up to mid-year, while still incomplete, were expected to top 2.7 million, based on estimates that June would fare as well as the two previous months—there were approximately 500,000 units sold in each of those months. This would bring the total sales for the six months of this year just slightly under the 2.8 units sold in the same period of 1953, and would be better than the mid-year total retail sales of 1952.

Productionwise, the industry should wind up the first half with close to three million units against 3½ million in the first six months last year. Although production is expected to taper off slightly during the second half of the year, the industry feels it would still be high enough to make this the third best year.

Used car sales continued to hold strongly, with nationwide averages in May about 2.3 per cent over the same month last year. The May figure was the third consecutive monthly increase over last year.



Purolator says:

Get 'em going... and coming!

This Month—sell Purolators and oil changes when customers *go on trips* . . . when they *come back*.

"Trip conditioning," we call it.

Easy selling, too! Easy—because motorists want to start out right—stay right. Easy—because *they don't want trouble on the road!*

Besides, Purolator has pre-sold them with big 2-color ads in Life, Post, Look and Collier's—as well as with signs and displays where they stop.

Chances are your customers are using Purolators right now. They're found on *more* makes of cars than any other filter—engineered to fit *all* makes and models.

Best by every test, the Purolator* Micronic* Oil Filter traps more dirt, finer dirt, *faster*—makes engines run better, *longer*.

Widely imitated, Purolator is never equalled!

*Reg. U.S. Pat. Off.

Remember—with every Purolator, you make 2 sales, 2 profits! One on the filter! One on extra oil to take place of the dirty oil thrown out with the dirty filter!

PurOlator *World's finest* OIL FILTER

PUROLATOR PRODUCTS INC., Rahway, New Jersey and Toronto, Ontario, Canada

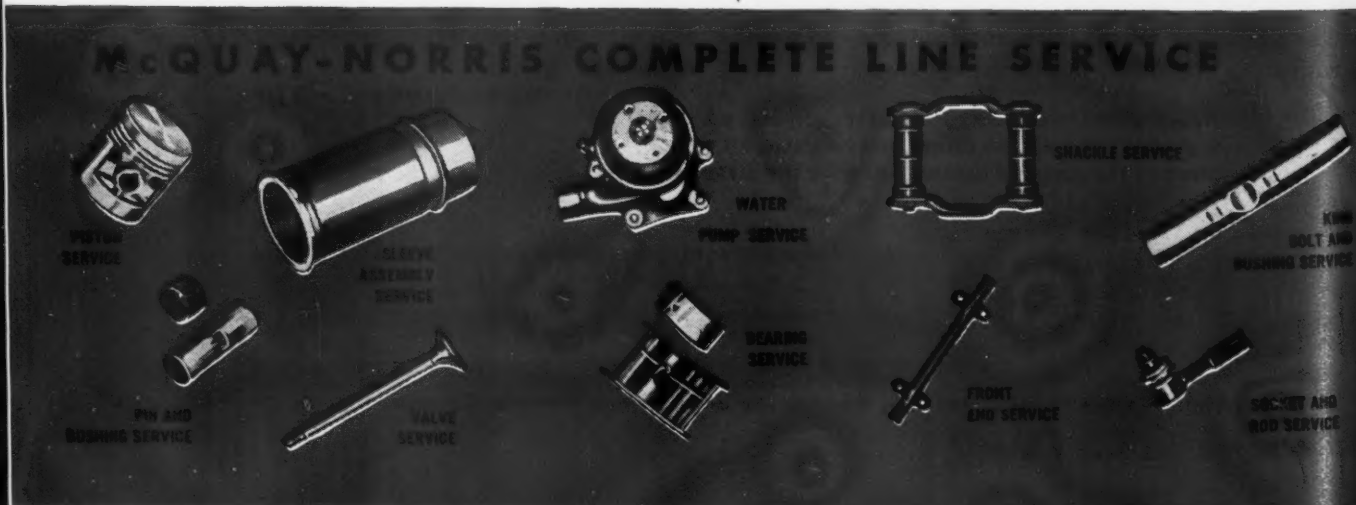
Your customer gets it started.

Your customers *depend* on you for good service. When they turn a piston ring job over to you they've as much as said, "Here's my car. It's up to you to repair it *right*."

To do a job right you've got to have *better* parts . . . and you can't do better than Chrome-Control Leak-Proof piston rings because

CHROME-CONTROL LEAK-PROOF PISTON RINGS WILL OUT-PERFORM ANY OTHER SET IN THE "HARD-TO-HOLD" JOBS REGARDLESS OF KIND, DESIGN OR PRICE.

YOU JUST CAN'T DO BETTER!



but you keep it going

CHROME CONTROL LEAK-PROOF

REG. U. S. PAT. OFF.

PISTON RINGS

McQUAY-NORRIS MANUFACTURING COMPANY

ST. LOUIS 10, MISSOURI

McQUAY-NORRIS
LEAK-PROOF
PISTON RINGS
FOR YOUR CAR

GET IT FROM YOUR JOBBER

one current to the other while welding to take advantage of the characteristics best suited for the work. This assures best possible welding results while speeding the job and cutting costs.

The welder has an AC welding service range of from 7 to 275 amperes and 7 to 200 amperes DC. It operates on 220/440 volt, 50/60 cycle current, single phase.

359. Grinders

Delta-Rockwell: Basic improvements in all single-phase and three-phase models of its standard 7-in. grinders and buffers have been announced by this company.

The improved models offer higher starting torque, higher breakdown torque, lower operating costs and greater adaptability, the manufacturer reports.

The single-phase models feature capacitor start motors in place of the split-phase motors used on earlier models, and all single-phase and three-phase models except the 550-volt model have been changed from single to dual voltage.

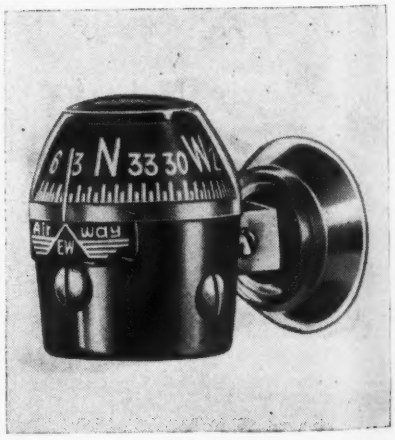
360. Drum Mike

Ammco Tools, Inc.: A newly designed drum micrometer that will "mike" all brake drums, regardless of hub height, either on or off the drum lathe has been introduced under the name Safe Mike.

The company claims that the instrument is completely universal, having a range of 8 in. to 18⅜ in. and will reveal the need for drum turning or drum replacement. The direct reading dial mechanism of the mike is ruggedly built, shock-proof, and plastic sealed, according to report.

361. Compass

Sherrill Products Co.: This company has introduced the new Airway compass. It can be installed by anyone and may be adjusted for accuracy by turning two



screws. A reinforced vacuum cup assures rigidity on the windshield.

362. Idler Arm Kit

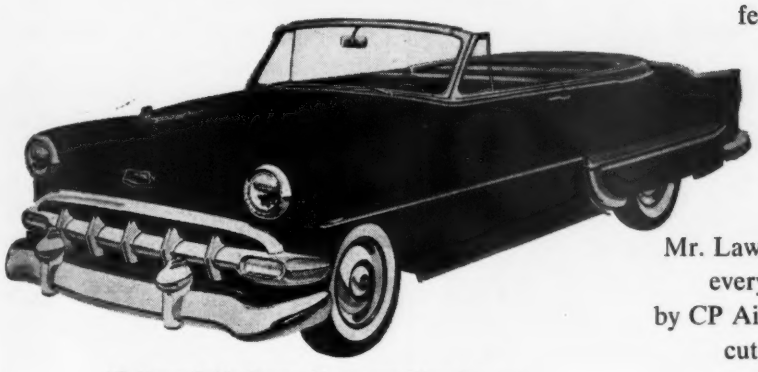
Lempco Automotive, Inc.: A new permanent idler arm kit for installation on most popular cars, old and new, has been announced by this company. The Sp-4 Kit

(*Continued on page* 112)

"The CP Air Impact Wrench is the most important tool in our mechanics' tool boxes"

. . . says Stephen Lawrence, Director of Service, Foley Chevrolet Motor Sales Co., Newark, N. J.

"Foley Chevrolet originally bought 15 CP Air Impact Wrenches and it wasn't long before they had more than paid for themselves," says Steve Lawrence, Director of Service. "Our mechanics must have liked them too, because they soon repurchased them for their own tool kits. One of their big advantages is the Controllable Power feature which lets us turn nuts to predetermined uniform tightness. We find Controllable Power most useful in replacing cylinder heads, for the many types of cap screws found on Power Glide overhaul – and wherever the factory has recommended torques."



CP Controllable Power Air Impact Wrenches are available with attachable angle heads and in ½", ¾" and 1" square drive capacities.

Mr. Lawrence expresses the feelings of service managers everywhere who are now realizing the savings effected by CP Air Impact Wrenches. To learn how you, too, can cut your nut turning time as much as 75% and get more billable output per man, write for information. *Chicago Pneumatic Tool Co., 8 East 44th St., N. Y. 17, N. Y.*

Chicago Pneumatic

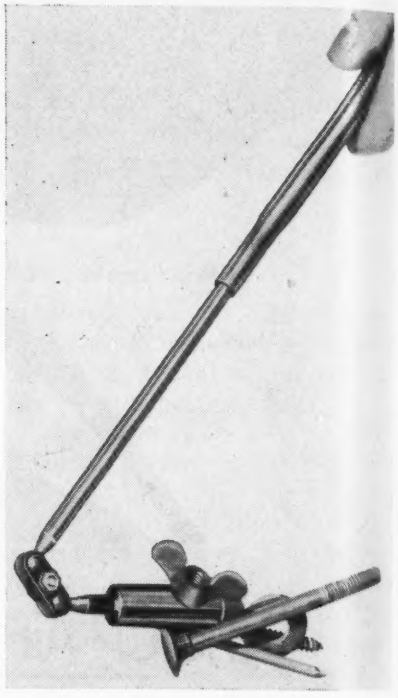
AIR AND ELECTRIC IMPACT WRENCHES • PNEU-DRAULIC TRUCK JACKS AND PUMPS • ZIP-GUNS • BEAD BREAKERS

provides "ball bearing steering" as well as reducing road shock in the steering wheel.

The maker says that the "road shock" load is transferred from threaded parts to a special rubber bushing, by placing the weigh of the tie rod linkage on anti-friction ball bearings, changing thread friction to ball bearing action, and by eliminating all play and looseness at this point.

363. Magnetic Tool

Ullman Products Corp.: A new tool that finds and retrieves small items that are hard to reach and grip has been marketed by this company. The job is done by a powerful Alnico V magnet, attached to an adjustable telescopic handle. The magnet, not affected



by oils or greases, has a magnetic strength that lasts indefinitely.

All-angle ball joints permit adjustment as required, with steel links to hold the pick-up angle firmly. The Magimmick is available in three sizes.

364. Sealer Applicator

Associated Producers, Inc.: This company has developed a new sealer applicator. The Goo-Jet Gun is made for use with Super Line 7½-oz screw top cans of adhesives, cements, or sealers. One gun is furnished with each kit of 8 cans.

Offered with two types of applicator tips, the blade tip and the round tip, the Goo-Jet Gun can be used for film application or beading of adhesives. The spout is of long "goose-neck" design facilitating applications to "hard-to-reach" places, the maker says.

365. Air Conditioner

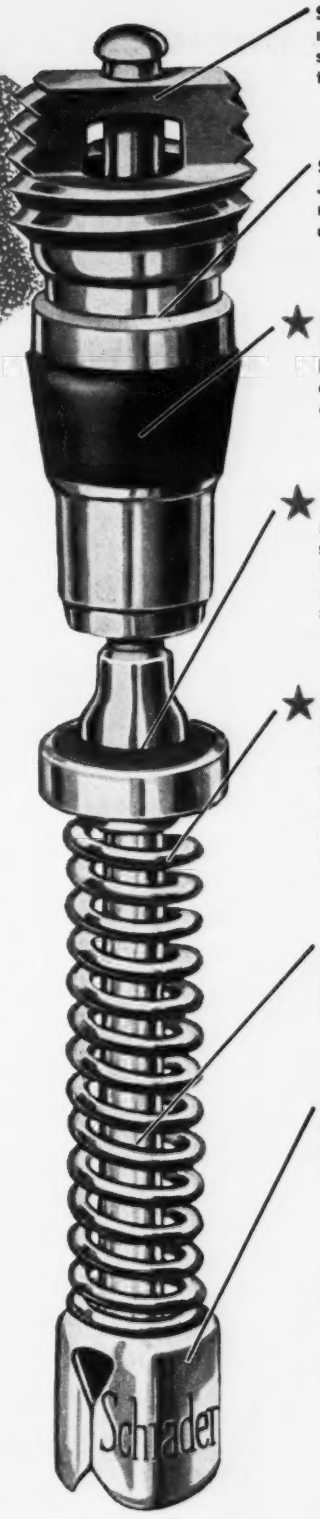
Novi Equipment Co.: A modern air conditioning system for 1954 Ford and Mercury cars is announced by this company. The unit is said to maintain 70 deg temperatures even in the hottest

(Continued on page 114)

GOOD NEWS

SCHRADER #4000 VALVE CORES—

now have NEW added features



STURDIEST BRIDGE resists damage from screwdriver tools when tightening or removing.

STRONGEST SWIVEL JOINT—will not separate when removing core.

★ **IMPROVED PLUG GASKET**—now withstands both extreme heat and cold. Wedge fit, will not distort.

★ **SUPER SEALING SEAT**—seals under higher tension—surer airtightness—finest heat and oil resisting rubber for longest service life.

★ **NEW HIGHER TENSION* Stainless Steel SPRING**—improves sealing—unaffected by heat. Spring-at-the-bottom provides obstruction-free air passage thru the top of the core.

FULL LENGTH PLUNGER PIN—guided top and bottom. Greatest travel insures easy inflation.

SPRING CUP—specially designed to align, anchor, make removal easiest.

**On long cores, the spring is never under tension until core is inserted in the valve. Then —and only then, it goes to work!*

NEW STAINLESS STEEL SPRING

- Provides higher tension for greater sealing pressure. The special long spring of 15 uniform coils is unaffected by severe temperature changes and corrosion.
- Resists loosening due to vibration . . . a major improvement in valve core performance without sacrificing inflation speed.

NEW AIRTIGHT SEAL

- Tighter, surer fit of sealing surfaces results from higher tension of the new spring.
- Improved plug gasket withstands extreme temperature variations. Wedge shape matches valve stem perfectly. Can't distort as core is inserted.
- Result? The best airtight seal ever made in a tire valve!

100% TESTED AND INSPECTED

- New, exclusive electronic testing and inspection of each and every core insure 100% uniformity and airtightness of every core you buy.

NEW PLASTIC PACKAGE OF FIVE

- New convenient and attractive plastic container of five in new folding lid display.
- Each core fully protected and sealed in a separate compartment.
- Convenient to use—easy to sell.

the New #4000-MB Tire Valve Core
. . . display and sell them in sets of five

. . . and #4000-V Tire Valve Core
. . . use them in your tube repair work

Whether in bulk or in plastic containers of five—your best buy for service or resale is the New Schrader #4000 Valve Core. Your Schrader supplier has them now! Get your needs today!

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated, 470 Vanderbilt Avenue
BROOKLYN 38, N. Y.

Schrader
REG. U S PAT OFF.

FIRST NAME IN TIRE VALVES

7483

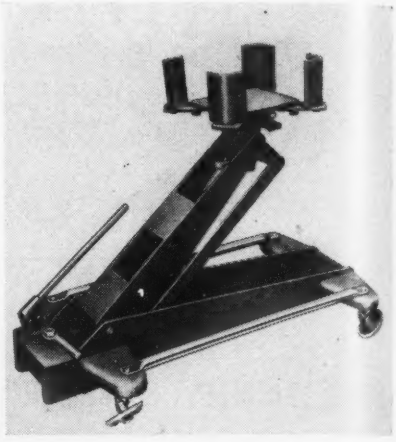
FOR ORIGINAL EQUIPMENT AND REPLACEMENT

New Products . . . . . Continued from Page 112

climates. In addition to a selective temperature control, the unit has dual outlet ducts that distribute the cool air throughout the car. A high-speed compressor is used, which does not affect other installed accessories and is accessible for servicing without removing any major components, according to the company.

366. Transmission Jack

Edmund J. Wudel Mfg. Co.: A new transmission jack, designed to service all makes of automatic transmissions, has just been announced by this company. Hydraulically operated, the unit comes with a pumping swivel handle which rotates into any desired position. One universal cradle is adjustable for all automatic transmissions except Powerglide. A special adapter head is furnishe for Powerglide service.



Casters allow movement over any type floor. The new jack may also be placed on a specially designed stand for working under a hoist, the company says.

367. Six Volt Battery

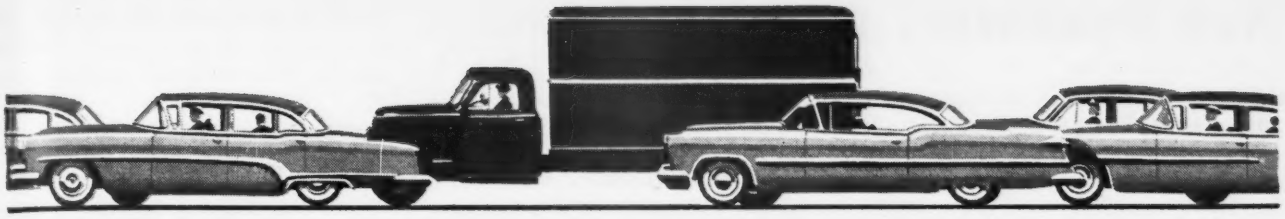
MoPar Parts Division: The new nickel cadmium battery, distributed by this company, "will last from ten to fifteen years. It cannot be damaged by overcharging, reverse charging or short circuits, and will operate in temperatures as high as 165 degrees and as low as 65 degrees below zero."

"I'm afraid this is going to be one of those days."

368. Upholstery Cleaner

Von Schrader Mfg. Co.: This company announces a redesigned and improved model of their upholstery deterger. According to

(*Continued on page* 118)



Automotive Wholesaler

for these great lines of original equipment parts

Almost half of the cars on the road use these world-famous

GENERAL MOTORS PRODUCTS

Every other car that passes your door is equipped with at least one of these products—and most cars are equipped with several. They represent the foremost choice of automotive engineers for their high standards of quality and performance—standards that have made General Motors products famous the world over.

The man to see about these great lines is your United Motors independent automotive wholesaler. He will welcome the opportunity to assist you in getting started with this popular and profitable line of parts. There's an independent wholesaler near you—why not get the full story from him today?

other UNITED MOTORS AUTOMOTIVE LINES ... HARRISON RADIATORS • **MORAINE** GASOLINE FILTERS
DELCO CLOCKS • **KLAXON** HORNS • AC GAUGES, SPEEDOMETERS • **ROCHESTER** LIGHTERS
DELCO ELECTRONIC PARTS • **DELCO** AUTOMOTIVE MOTORS • Saginaw JACKS

GENERAL MOTORS PRODUCTS GM GENERAL MOTORS SERVICE UNITED MOTORS LINES

the maker, the unit is rustproof and weighs 39 lb.

The machine builds up a dry suds which is shampooed into the fabric and then vacuumed off along with the dirt. No rinsing is required and the cleaned upholstery is ready to use in a couple of hours, it is claimed. It is further stated that the synthetic detergent leaves no sticky alkali to cause resoiling or cause dyes to bleed.

369. Extinguisher Cart

Ansul Chemical Co.: A rubber-tired ball bearing cart has been designed by this company to transport dry chemical fire extinguishers to the scene of a fire.

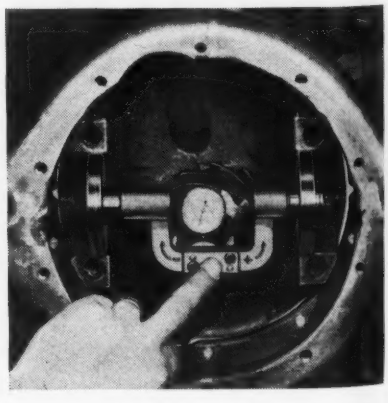
Said to be suitable for use where fire hazards are dispersed over large areas, the Pull-it can maneuver in narrow factory aisles. The 30-pound extinguisher

mounted on it can be equipped with 6 ft of rubber hose, permitting operation of the extinguisher from the cart. The cart is 44 in. high, 16 in. wide and 13 in. deep. It weighs 16 lb net.

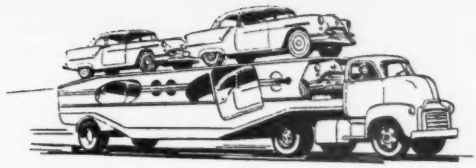
370. Pinion Setting Gage

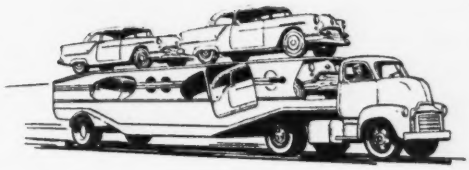
Kent-Moore Org., Inc.: A new dial indicator type pinion setting gage for Buick, designed to reduce adjustment time and increase assuracy of pinion setting, has been announced by this company.

With this pinion setting tool, readings are taken from a dial indicator rather than from micrometer readings . . . thus eliminating the human element of touch-setting a micrometer by feel, the company says. The new direct reading adjustment method

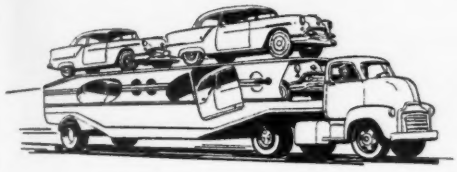


(*Continued on page* 120)





THE "ROCKETS" ARE ROLLING AS NEVER BEFORE



"Rocket" sales records aren't being broken—*they're being smashed!* For this year's flashing new "Rocket" Engine Oldsmobiles have everything a car buyer could want! Sensational power! Stunning beauty! Effortless handling! And Oldsmobile dealers are capitalizing on this unprecedented appeal . . . demonstrating Oldsmobile to more people than ever before! It all adds up to another rocketing success for Oldsmobile—and to another year when it's SMART to BE with OLDS!

THE TREND IS UP AND OVER TO OLDS!

"ROCKET" ENGINE

OLDSMOBILE

OLDSMOBILE DIVISION • GENERAL MOTORS CORPORATION • LANSING, MICHIGAN

New Products . . . . . Continued from Page 118

does away with adapters, charts and computations. As a result, pinion setting time is reduced by two-thirds and accuracy is assured, according to the manufacturer.

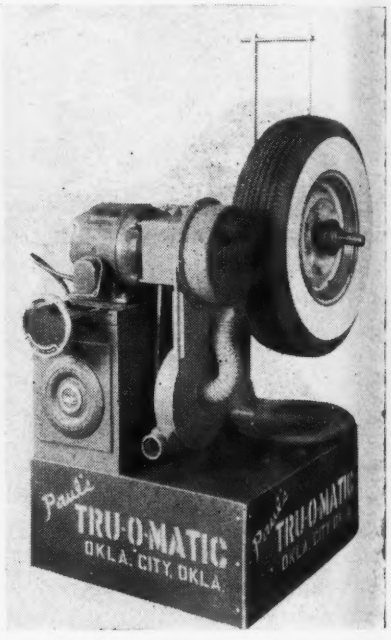
371. Automatic Pullers

Blackhawk Mfg. Co.: A complete line of 127 pullers and pulling attachments that cover all major types of pulling applications in automotive repair work is now being marketed by this company.

Two and three Arm Pullers have a special "power-pitched" buttress thread which enables mechanics to develop 30 per cent more torque than with standard thread. This makes it easier to create the tremendous force often needed, the maker claims. Lips of pulling arms are reversible for inside and outside pulling to solve a wide variety of pulling problems. Basic parts are interchangeable between corresponding sizes of two and three arm pullers to eliminate costly duplication.

372. Tire Machine

Paul's Mfg. Co.: A new automatic tire truing machine, claimed to true tires to within .003 inch of roundness, is now being produced by this company. The Tru-O-Matic is completely automatic and will true and re-crown passenger car tires in three to five minutes, the maker says.



373. Bench Model Riveter

Robinson Products, Inc.: The new air-powered, bench-model riveter announced by this company will reline brakes of any size, from any vehicle. The maker says the unit will drive out or clinch all rivets from No. 4 to No. 10, inclusive.

It is stated that this riveter has an air cylinder that delivers over two tons of pressure, taking a maximum of 150 p.s.i. from normal air supply lines. Semi-portable, it weighs only 60 lb, and is foot operated.

(*Continued on page* 122)

WEAVER TWIN POST LIFTS

increase shop production sufficiently to justify one in every service stall

YOU win — the Weaver way . . .

Actual time studies on a wide variety of under-vehicle service operations show 25% to 100% production increases when using Twin Post Lifts over ordinary methods.

Twin Posts *(made only by Weaver)* have no rails in the way and afford unobstructed access to entire under-chassis area. Futhermore, independent post operation permits positioning vehicle at most convenient working angle. High lift enables mechanics to roll their tool stands within easy reach and stand up to their jobs . . . No creeping around on the floor.

The Weaver Twin Post is the only automotive type lift that can handle all wheel base lengths without loss of lifting capacity. Available air-oil or electrically operated. Model EC-100, shown, is regularly furnished with wheel base adjustment from 88" to 148", with other wheel base adjustments available on special order.

Consult your Weaver Jobber or write us for time study proof of Twin Post superiority job-by-job. Ask for Bulletin MA-457.

WEAVER

WEAVER MANUFACTURING CO., SPRINGFIELD, ILL., U.S.A.

SERVICE SHOP EQUIPMENT

Complete Weaver line includes: Twin Post Lifts . . Single Post Frame Type Lifts . . Unit Lifts . . Wheel Alignment Equipment . . Headlight Testers . . Brake Testers . . Wheel Balancing Equipment . . Jacks . . Wheel Dollys . . Car Washers . . and Air Compressors.

New Products . . . . . Continued from Page 120

374. Rust Inhibitor

Shell Oil Co.: A new volatile corrosion inhibitor has been announced by this company. Portions of the crystalline amine nitrate compound volatilize very rapidly and will prevent rust almost immediately. At the same time, the company says, some of its constituents evaporate more slowly, for longer lasting protection. The new material, a white powder about as fine as talcum, will not clog a flocking gun, and can easily be applied with a squeeze bottle or salt shaker, according to the maker. The powder may be dissolved in alcohol and applied in solution. V.P.I. does not have to be applied directly to the surface it is to protect, it is stated, and does not have to be removed from equipment before it is placed into operation.

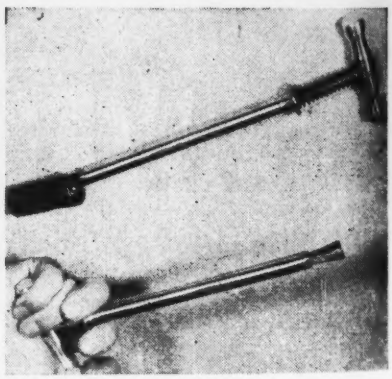
375. Portable Car Washer

Nutritional Concentrates, Inc: A new portable professional car washing unit for service garages and fleet operators, has been announced by this maker. According to the manufacturer, the unit permits washing the complete exterior and wheels of an automobile in seven or eight minutes.

The Washeze consists of heli-arc welding mixing chamber of heavy gage aluminum, 25 ft of twin heavy duty hose and an aluminum-handled mop with 3-way mixer valve and interchangeable head. To use it, the washer attaches it to any standard hose, places a few ounces of liquid or soluble soap or detergent into the mixing chamber and turns on the water.

376. Lifter Puller

Telematic Corp.: This company has introduced a new hydraulic valve lifter puller. The unit, known



as the Buddy, works from the side of the motor on Buicks and Chevrolets and through the push-rod holes on Cadillacs. The company says that it is not necessary to dismantle the hydraulic lifter. The device is of all steel construction and it is claimed that the replaceable tip will not damage the lifter.

377. Catalyst

Sola Catalytic Co.: A physical catalyst for radiators is now avail-

(*Continued on page* 126)

Ben Duffy, President of Batten, Barton, Durstine & Osborn, Inc., tells why:

"You don't have to wait for Groucho!"

"Snap on your TV set Thursday night—there's Groucho," Ben Duffy points out, "and he never fails to be there.

"You—and BBDO—can thank Air Express for that. It's Air Express that carries Groucho's films regularly.

"TV films are always due at a certain hour, often the whole way across the country. The same with printing plates. They may have to reach 100 different cities to make a specific edition of many publications.

"Air Express gets these essential materials there—every day in the year. It's the most reliable service we know.

"Frequently, we send duplicate shipments in case one should be marred or lost in handling—but this precaution has never once been necessary.

"Important, too, is the fact that almost all our shipments—more than 1,000 a year—cost us less with Air Express than with other air services."

It pays to express yourself clearly. Say Air Express! Division of Railway Express Agency.

Air Express

GETS THERE FIRST *via U.S. Scheduled Airlines*

CALL AIR EXPRESS . . . *division of* RAILWAY EXPRESS AGENCY

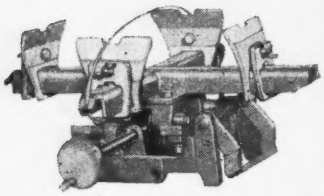
Saves Time...Saves Money

THE NEW WALKER NO. 48 Uni-Cradle

FOR USE UNDER LIFTS

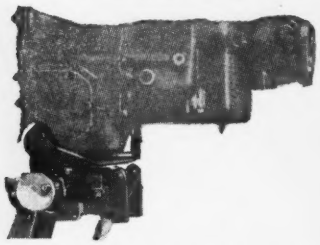
HANDLES ALL AUTOMATIC TRANSMISSIONS INCLUDING CHEVROLET "POWERGLIDE"

UNIVERSAL LIFTING HEAD ASSEMBLY

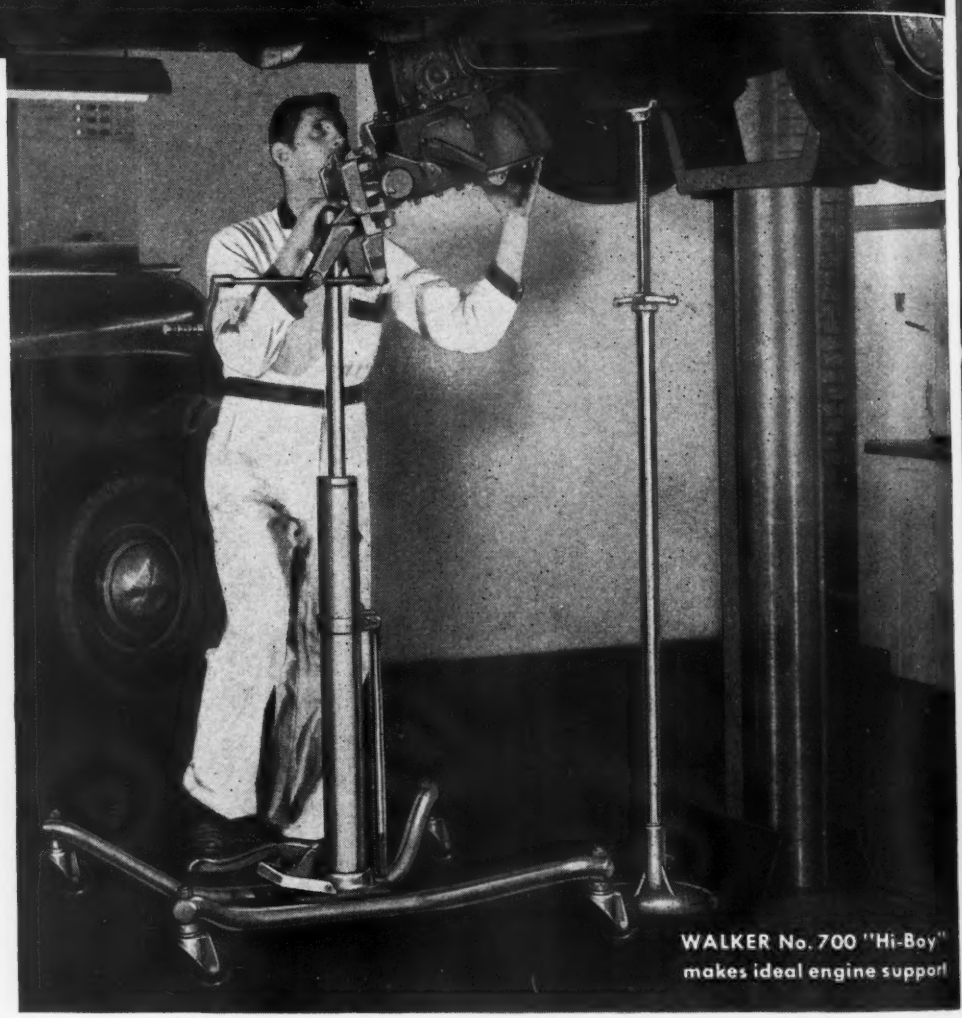


The "All-Transmission" lifting head is furnished with a complete set of specially designed pick-up blades for each type of automatic transmission. No makeshifts.

CHEVROLET "POWERGLIDE" ADAPTOR HEAD



Each Walker Uni-Cradle is equipped with a special, quickly attached adaptor head which bolts directly to the transmission for servicing Chevrolet "Powerglide" units.



WALKER No. 700 "Hi-Boy" makes ideal engine support

● The new Walker No. 48 hydraulically-operated pedestal type Uni-Cradle is the finest answer to fast . . . safe . . . efficient automatic transmission service. Developed in cooperation with car factory service managers, it combines *all* movements and controls necessary for under-lift servicing of all automatic transmissions—including Chevrolet "Powerglide."

It raises and lowers the transmission hydraulically over a range of 48″ to 76 5/8″. "Bomb-Sight" mechanical controls accurately tilt and "Axis-Rotate" the unit for ease of removal, alignment and installation.

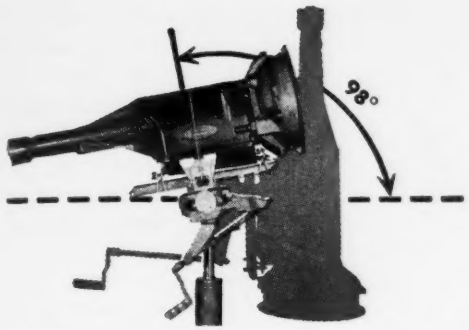
Actual tests of thousands of Walker Uni-Cradles now in use show amazing savings in time and labor under normal service conditions because the Walker Uni-Cradle makes automatic transmission removal and installation a safe, one-man job. No handling of the transmission itself is ever necessary.

Prove it to yourself . . . ask your Walker jobber salesman for a Uni-Cradle demonstration . . . either on the floor or under a lift. There is a Walker Uni-Cradle for every service requirement.

WALKER LEADS

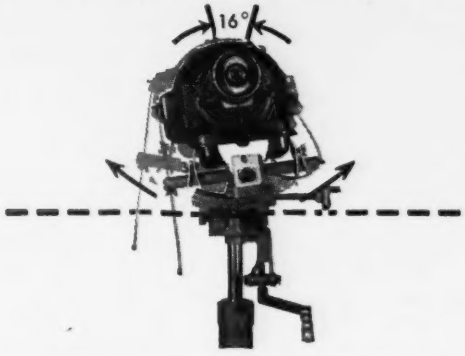
Saves Valuable Manpower!

It Tilts the Transmission Through a 98° Arc for Easier Removal and Installation



To meet all requirements for the service of all transmissions, the Walker Uni-Cradle has a tilting range from 80° forward, necessary for the removal of the Chevrolet "Powerglide," to 18° backward—often required for proper alignment.

It "Axis-Rotates" the Transmission for Accurate, More Positive Alignment



Quick, perfect alignment of the locating dowels and bolt holes on the bell housing is easy with the Uni-Cradle's unique 16° rotating movement "Axis-Centered" on the transmission itself. Saves readjustments.

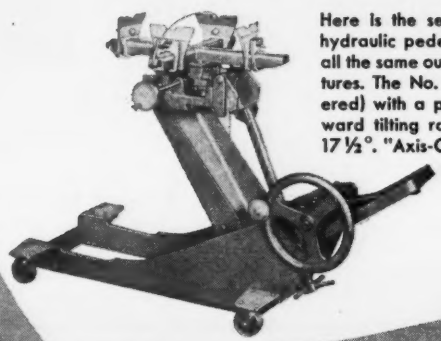
ASK YOUR WALKER JOBBER FOR A DEMONSTRATION OF THESE

Exclusive Uni-Cradle Features

- "AXIS-CENTER" ROTATION
- "BOMB-SIGHT" CONTROLS
- 98° TILTING ARC
- "ALL-TRANSMISSION" CRADLE

The dependable Walker automatic transmission jack designed especially for floor-service use . . .

WALKER NO. 44 Uni-Cradle



Here is the service floor version of the hydraulic pedestal type Uni-Cradle with all the same outstanding, time-saving features. The No. 44 is only 16" high (lowered) with a power raise of 17⅞". Forward tilting range is 75°, backward to 17½°. "Axis-Center" rotation, 16°.

WALKER MANUFACTURING CO. OF WISCONSIN
RACINE, WISCONSIN
Jacks • Exhaust Silencers • Oil Filters

INJACKS

able through this company. "Designed for all types of engines, the Sola-Cell removes scale, and reduces wear, friction, rust and corrosion." The catalyst is enclosed in a brass metal container approximately three inches long and ¾-inch in diameter. A chain and ring arrangement is attached to the cylinder for installation.

378. Counterboring Tools

B. K. Sweeney Mfg. Co.: A new, portable counterboring tool for use in re-machining the cylinder block counterbores on heavy duty truck engines has been announced by this company.

The new device locates squarely within the cylinder bore and is held in rigid position by retractable centering pins to assure perpendicular machining of the counterbore, the company claims.

Employing a single, carbide-tipped cutting bit mounted in a depth-of-cut control head, the tool is said to be fast-operating, accurate to well within specified tolerance, and simple to maintain. It is manually operated with a speed handle. Depth of cut can be checked without removing the tool from the cylinder bore. The company claims that the device can be used with the engine in or out of the frame, in the shop or on road calls.

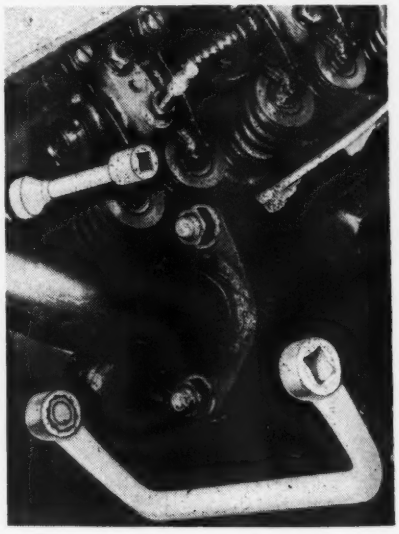
"Looks like we're getting near reservation," one Indian said to his companion as they were driving back after a hilarious evening in town.

"How you know?"

"We're hitting more Indians now."

379 Torque Wrenches

Owatonna Tool Co.: Two new wrenches that are needed to fit



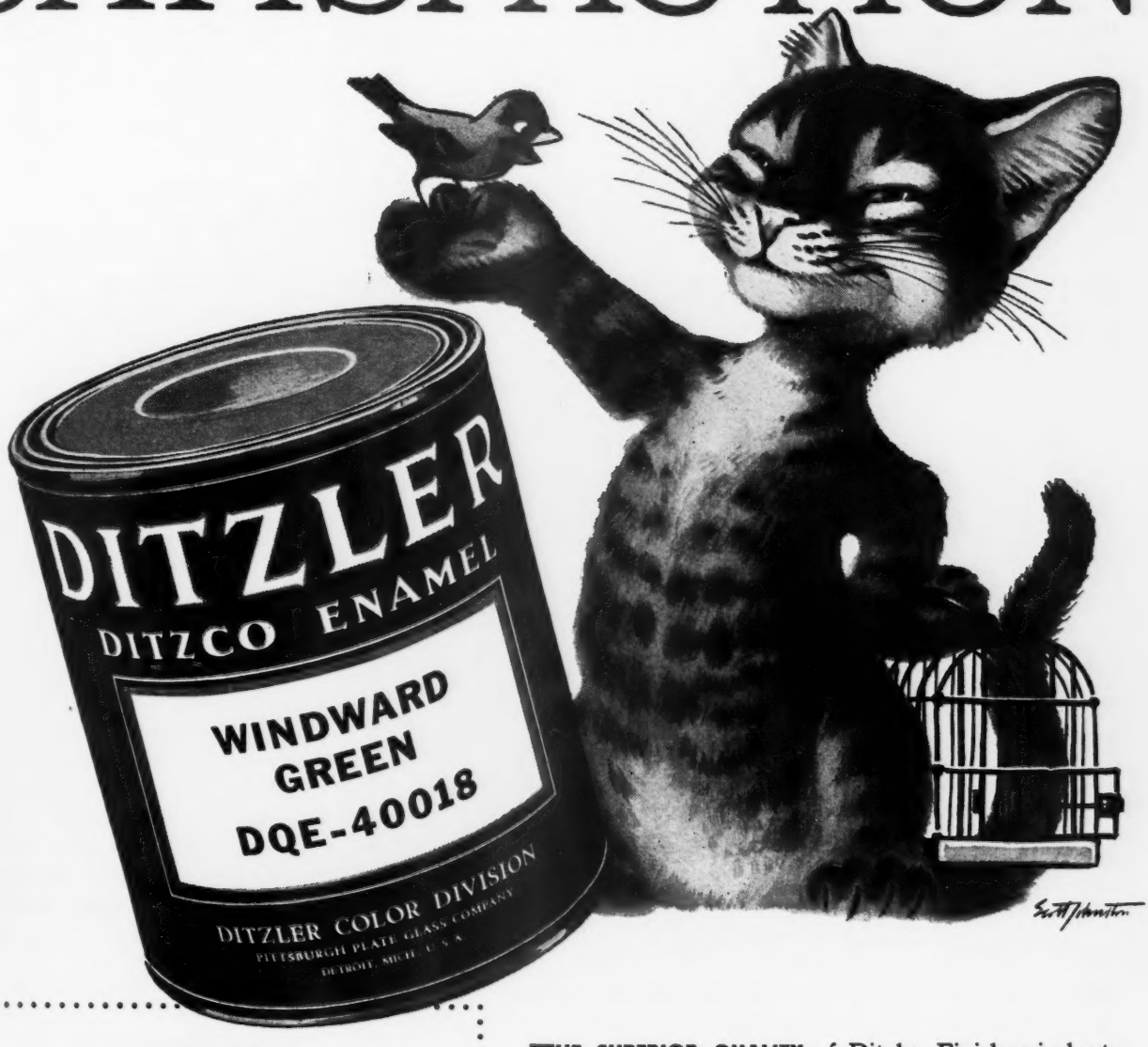
the head bolts on 1954 Ford and Mercury engines are being marketed by this company.

These two wrenches are designed for torquing all the head bolts and to provide clearance to reach each bolt regardless of its position. The smaller of the two wrenches works on all head bolts in the center of the engine while the larger wrench works on the head bolts under the manifold. Both wrenches have the standard ½ in. square drive for use with standard torque wrenches.

(*Continued on page* 146)

ONLY DITZLER'S DEPENDABLE PERFORMANCE CAN GIVE SUCH

SATISFACTION



DITZCO QUICKSET ENAMELS OFFER YOU THESE 3 GREAT FEATURES

1. Cost less to apply because their unusually high solid content gives them more film-forming materials.
2. Colors are accurately matched to motorcar manufacturers' original color standards.
3. Have better color retention because they are formulated from the same pigments as the original factory color.

THE SUPERIOR QUALITY of Ditzler Finishes is best shown by their outstanding performance in the motorcar industry. For fifty years these excellent coatings have been preferred by most of the leading manufacturers of passenger cars, trucks and buses. This continuous preference—which lifted Ditzler to its present rank as the leading exclusive manufacturer of automotive finishes—was gained solely by the year-in and year-out *dependability* of its products. There can be no stronger proof that Ditzler Finishes are better than any others for all your refinishing needs.

DITZLER COLOR DIVISION, PITTSBURGH PLATE GLASS COMPANY
Detroit 4, Michigan

DITZLER
PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS
PITTSBURGH PLATE GLASS COMPANY

Service Suggestions

Twin Carburetor Adjustment on Hudson

Following is the step by step outline covering the carburetor and linkage adjustment for a Hudson 7-B with twin carburetors:

1. Remove front and rear air cleaners.

2. Install Linkage Adjusting Pin J-2544-1 through accelerator pedal link bellcrank lever and into hole in cylinder block provided for adjustment purposes.

3. Connect tachometer to distributor, but before warming up the engine remove clevis pins from the yokes at the end of both throttle shaft to carburetor rods. While holding the front carburetor fast idle cam in the "off" position, turn the throttle stop screw until it just touches the cam. Repeat with the rear carburetor.

Turn the idle mixture adjustment screws down until they are seated lightly and then back them out two turns. Warm up the engine and bring the engine idle to 500 rpm for Hydra-Matic transmissions, 550 for standard transmissions and 575 for overdrive, by turning the two throttle stop screws in or out equal amounts.

Adjust the mixture adjustment screw on each carburetor to get the maximum increase in idling speed and if necessary, readjust the throttle stop screws to cut the idling speed down to the recommended rpm. When adjusting the idle speed, always turn each throttle stop screw an equal amount.

4. Adjust front and rear throttle shaft to carburetor rod clevises so that clevis pins pass freely through clevis and cross shaft levers. Install clevis pins and clevis cotter pins.

5. On cars equipped with Hydra-Matic Transmission, adjust throttle rod by disconnecting transmission throttle rod trunnion from accelerator pedal link bellcrank. Push rearward on transmission throttle rod to hold transmission T.V. lever against stop in transmission and adjust throttle rod trunnion so pin of trunnion slips freely into bellcrank. The throttle rod should then be shortened by 1/16-inch or 1¾ turns clockwise of the top trunnion jam nut. Lock this adjustment by tightening the lower jam nut against the trunnion.

6. Remove the Linkage Adjusting Pin J-2544-1.

7. Adjust the length of the accelerator pedal to bellcrank rod to get 1/64-inch to 1/16-inch clearance between the pedal and pedal stop at wide open throttle.

8. Reinstall air cleaners.

Preliminary Valve Lash Adjustment on 1954 Mercury

In order to facilitate performing the preliminary valve lash ad-

(*Continued on page* 130)

At 265,000 Miles.... CLEVITE* 77's STILL GOOD! SHAFT STANDARD!

EXPERIENCED maintenance men know that there is an important difference in engine bearing performance. They realize that this variance can greatly affect the economical operation of trucks, busses and passenger cars.

The shop foreman of a large food distributing fleet in New England has proven that Monmouth offers the best solution to low-cost bearing service. During a preventative maintenance inspection after 265,000 miles of delivery service, the results showed that Monmouth Clevite 77 Engine Bearings, both main and connecting rod, were in good shape and the shaft standard.

This is one more instance of the plus value offered by the world's largest manufacturer of original equipment bearings. The next time you need bearings, get Monmouth from your NAPA Jobber.

NAPA Assurance of Quality

Your NAPA Jobber is a Good Man to Know!

*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation.

Monmouth TRADE MARK

ENGINE BEARINGS
CLUTCH PLATES AND PARTS
CHASSIS PARTS

Clevite Service **The Cleveland Graphite Bronze Co.**
Division of Clevite Corporation, Cleveland, Ohio

Service Hints . . . . . Continued from Page 128

justment on the subject engines, whenever a replacement of camshaft, valves, push rods or lifters has been performed, the following sequence of operation is suggested. This sequence will reduce the number of crankshaft positions from 8 to 3 when performing the initial valve lash adjustment which is .019-inch.

NOTE: Make sure push rods are seated properly in tappets before making the preliminary adjustment.

Preliminary Adjustment

1. Turn the engine over until No. 1 piston is at top dead center (T.D.C.) on the compression stroke and the timing mark on the crankshaft pulley is at and aligned with the timing pointer. Adjust the lash on the following valves: No. 1—Exhaust, No. 1—Intake, No. 4—Exhaust, No. 2—Intake, No. 5—Exhaust, No. 7—Intake.

2. Turn engine over an additional 180 degrees (this puts No. 4 piston on T. D. C.) and adjust the following valves: No. 6—Exhaust, No. 4—Intake, No. 8—Exhaust, No. 5—Intake.

3. Turn engine over an additional 270 degrees (this puts No. 3 piston on T. D. C.) and adjust the following valves: No. 2—Exhaust, No. 3—Intake, No. 3—Exhaust, No. 6—Intake, No. 7—Exhaust, No. 8—Intake.

NOTE: The above procedure as outlined should be used only when performing the preliminary lash adjustment. The final (hot) lash adjustment should be performed as follows:

"Was your friend shocked over the death of his mother-in-law?" "Shocked! He was electrocuted."

Final Adjustment

Run the engine, with the rocker arm covers installed, until normal operating temperature. Remove the rocker arm covers. Check the valve lash with the engine idling. The valve lash setting is .019" hot for both the intake and the exhaust valves.

Replace the rocker arm cover with a new gasket cemented to the cover only if necessary. Tighten the cover nuts.

Timesaving Hints for Removing Hudson Camshafts 4D, 5D & 7D

Camshaft removal may be accomplished with less effort and in less time by following a few suggestions that have proven to be shortcuts.

First—it is not necessary to remove the cylinder head, valves or engine oil pan. Take out the spark plugs to avoid damage to electrodes when valves are raised. Remove valve tappet covers and using a suitable valve lifting tool, raise valves sufficiently high to insert a tappet and valve holder.

(*Continued on page* 132)

JUST ONE OIL

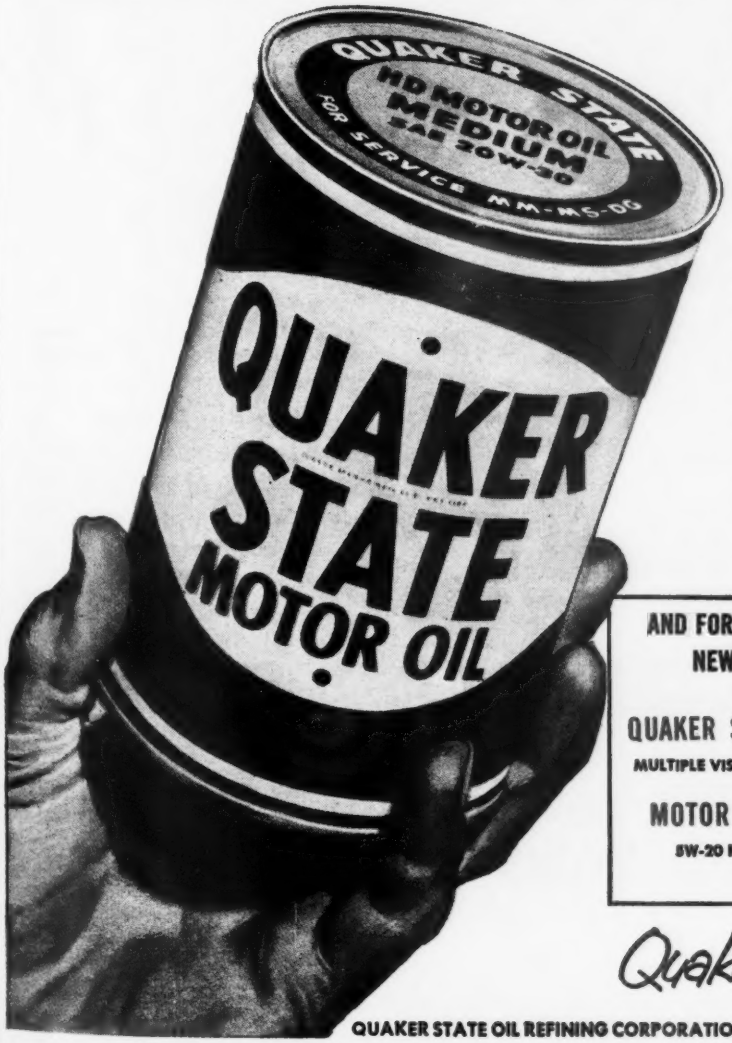
...makes summer selling simple!

NEW GUARANTEED QUAKER STATE MEDIUM HD OIL

with the

Miracle Film

MEETS EVERY SUMMER DRIVING NEED!



Reduces inventory, reduces ordering time, reduces money tied up in slower moving grades —builds up sales! With Quaker State Medium HD Motor Oil your summer inventory is simple. Here's *one oil* that meets every normal summer driving need.

This is the oil that forms the Miracle Film . . . that cleans, cools and protects moving engine parts. Refined from 100% Pure Pennsylvania Grade Crude Oil—the result of over 50 years of leadership in automotive lubrication.

So good that Quaker State says: *Regardless of claims, or talk of mystery ingredients, no motor oil can surpass Quaker State for performance, lubrication, and oil and gas consumption qualities.*

Make it your profit leader!

AND FOR THE MORE SENSITIVE DESIGNS OF NEW HIGH COMPRESSION ENGINES

QUAKER STATE MULTIPLE VISCOSITY MOTOR OIL 5W-20 HD

Overcomes Engine Ping and Knock
Frees Sticking Valve Lifters
Prevents Camshaft and Lifter Wear
Increases Gas Mileage

For use where SAE 5W, 10W, 20W or 20 grades are recommended by the manufacturer.

Quaker State—your sign of Quality

QUAKER STATE OIL REFINING CORPORATION, OIL CITY, PENNA. *Member Pennsylvania Grade Crude Oil Association*

Service Hints . . . . . Continued from Page 130

one Part No. J-1612-3A, under each of the tappet adjusting screw heads. You may find it most convenient to position them at the sides or even behind the tappet instead of in front. The important point is to be sure they are secure so as to preclude the possibility of disengaging and allowing the tappet to fall into the oil pan during removal and installation of the camshaft.

Drain and remove radiator and timing chain cover. Turn engine over with a starter button until No. 6 cylinder is at top dead center firing position, when the sprockets will be at an ideal point for checking valve timing marking when installing the chain.

Before removing the oil pump note carefully the position of the distributor rotor, so that when installing it the gears may be properly meshed for correct ignition timing.

After removing camshaft sprockets and timing chain, unbolt and remove both engine front rubber mounts.

This permits the front of the engine to be lowered to a position that will allow the camshaft to clear through the grille louvers. Exercise care both in removing and installing the camshaft so as to avoid damaging the bearings or dislodging the tappet holders. When installed, check for endplay of camshaft. This should be .006 to .010 in. Check tappets for correct clearance—.008 intake and .010 on exhaust.

"I was sick Sunday, Mr. Hamilton, could I have today off instead?"

Removing the Hudson Overdrive Housing

With the car on stands or jacks, remove the drain plugs and drain the lubricant from the transmission and overdrive cases. Disconnect the governor switch wire at the control switch and the two wires at the solenoid. Now remove the nuts and washers from the V clamps holding the propeller shaft universal cross to the rear axle pinion companion flange.

Lower the rear end of the propeller shaft and pull the complete assembly backward out of the transmission.

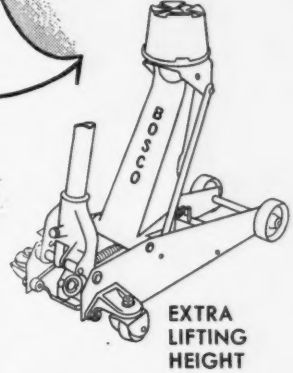
NOTE: To save trouble, use masking tape to hold the bearings to the universal joint.

(*Continued on page* 134)

just 24½" long
weighs only 68 lbs!

You'll be surprised at the feats "Bosco" Service Jack can perform. Its compact chassis and practical light weight make it the easiest-to-handle, simplest-to-maneuver jack on wheels! "Bosco" features a heavy steel frame; unbreakable, malleable iron lifting arm; and a durable, metal-covered pump. These plus-value construction advancements give "Bosco" the strength and stamina of much bigger jacks, without the extra bulk and chassis length that hinders and slows down service work.

Can you imagine an honest-to-goodness service jack like this costing just $61? Once you use a "Bosco", you'll see why we call it the 1¼-ton Service Jack that performs like a bigger one . . . in 'most everything but price!



EXTRA LIFTING HEIGHT

With this handy saddle elevator* "Bosco" raises the load 21¼"—even higher than larger-capacity jacks.

**available at small extra cost.*

...this is the baby

that makes servicing

easier, speedier **BOSCO** 1¼ ton service Jack

R650

AUTO SPECIALTIES MFG. CO., ST. JOSEPH, MICHIGAN • FOUNDED 1908

Service Hints . . . . . .

Continued from Page 132

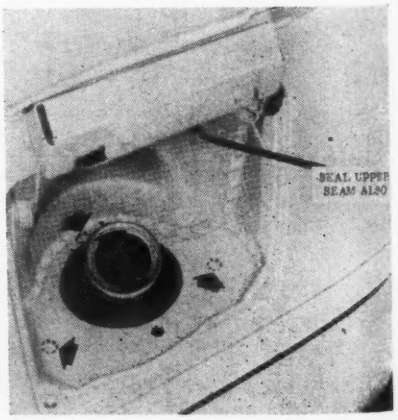
Then pull out the speedometer cable and speedometer driven gear. Disconnect the overdrive control cable from the control shaft lever. Drive out the tapered pin in the overdrive control shaft shown in this view, and pull the control shaft out as far as possible to disengage the operating cam of the shift shaft from the slot in the shift rail.

Now you are ready to pull the three bolts and lock washers and mainshaft rear bearing retainer from the housing. Then pull out the four bolts attaching the housing to the transmission and the overdrive adapter. Next, take out the overdrive mainshaft rear bearing snap ring and spacer washers.

With a rawhide mallet, lightly tap the end of the overdrive mainshaft and remove the overdrive housing. Tapping the mainshaft will prevent the shaft from coming off with the housing and spilling the free wheeling rollers. Now you can service the exposed items mentioned at the beginning.

Sealing Gasoline Tank Unit On Ford Station Wagons

In the event raw gasoline fumes are detected inside the station wagon models, first inspect for leakage at the gasoline gage tank



unit, gasoline tank filler connection, and all pipe fittings and connections to the tank. It is also necessary to inspect the seams and corners (top, bottom and all sides) of the gasoline tank filler hous-

ing. If there are any openings whatsoever in these seams, joints or corners, spillage resulting from overfilling of the tank may allow fumes to leak into the interior of the station wagon. It is essential that all the seams and corners of the gasoline tank filler housing be sealed airtight and that adequate drains be provided to assure drainage of the liquid gasoline and water out of the housing as rapidly as possible.

Reasons and Checks for High Speed Vibrations

High speed vibration is most noticeable in the steering wheel and occurs usually at speeds in excess of 60 mph.

In contrast to thumping, the high speed vibration may be caused by an unbalanced wheel assembly. It may also be caused

> ***Excited wife:** Doctor, do hurry. My husband is at death's door.*
>
> ***Cooperative doctor:** Don't you worry, lady. I'll pull him through.*

by a tire or wheel with excessive run-out or a mechanical condition such as a wheel misalignment, wheel wobble, looseness in steering mechanism, and so on.

To find the cause of high speed vibration, proceed as follows:

1. Check the balance of all tires.

A good method for determining whether the difficulty is due to balance is by subjecting the wheel to the spinner test. To do this, jack up the wheels—apply the spinner—then remove the spinner from the wheel after it has reached maximum speed and permit the tire to rotate freely. If a wheel is out of balance, there will be excessive vibration in the bumper, fender or other parts of the car.

The spinner test should be given also after the wheels are balanced. (Always balance the complete assembly of tire, tube and wheel. In balancing the front wheel, it is advisable to include the hub and brake drum.) If the vibration persists, check for dragging brake or loose wheel bearings. If brake and bearing are

(*Continued on page* 136)

Service Hints . . . . . Continued from Page 135

correct, the difficulty lies elsewhere, so proceed with the next step.

2. Check all tires for radial run-out.

Radial run-out should be checked by the fixed object method as used for locating a thumping tire.

Do not attempt to check by merely watching the variation in clearance when the tire is jacked off the floor just enoubh to permit rotation. Such a method will invariably lead to an exaggerated estimate of the extent of the run-out. The variation must be measured.

If the tire appears to be excessively out of round at the tread, proceed with step three before removing it.

3. Check radial run-out of wheels.

Radial run-out of the wheel can be checked at the base of the rim flange without removing the tire.

If there is an appreciable amount of run-out, dismount the tire and check the run-out at the middle of the rim bead seat to obtain a more accurate measurement.

If wheel and tire run-out is discovered at the same location, the complete assembly can sometimes be improved by moving the tire so as to shift the relative positions of the high and low spot of tire and wheel.

"Are you sure we've got a fuel pump for a 1910 Stanley Steamer, fellows?"

It is not possible to state definitely just how much run-out causes vibration. Sensitivity and unbalance varies considerably for different makes and models of cars.

Furthermore, the tolerance required by the rim manufacturers is of about the same order of magnitude as the average run-out on tires. If a given tire or rim are assembled so that the run-outs are added, then the assembly may be out as much as ⅛ in.

A tire-wheel assembly out of round by this degree on a car with a high speed vibration complaint would be subject to suspicion and should be corrected by shifting the tire on the wheel or by replacing the tire or wheel or both, depending on what the checks have shown, as outlined under three above.

Thumping and vibration are problems which every tire and car

dealer must face and problems that are bound to require a certain amount of servicing. So, in the interest of a customer's goodwill, it is best to recognize this fact, to show an interest in your customer's problem and to do your best to correct it.

Explain to your customers the cause of thumping and vibration —that they are not necessarily due to imperfect tires, but rather are frequently due to the smooth roads and smooth running, well-balanced cars they drive. Point out that minor, difficult-to-produce disturbances are considered commercially acceptable and will in no way affect tire wear or car performance.

New Type Piston Developed For 6-Cyl Pontiac Engines

A new type piston has been developed for use in the six cylinder engine. A comparison of the new and old type piston shows that the area around the piston pin hole is solid on the new type piston.

Engine assemblies containing the new type pistons can be identified by the letter "K" added behind the last digit of the production engine number on the pad at the left rear of engine. The letter "K" should also be stamped in this location whenever a set of the new type pistons are used to replace the early type pistons.

Only the new type pistons will be serviced. Piston and pin assemblies are available under the following part numbers:

Piston Size	Part Number
Standard (3.562 Dia.)....	517828
Standard (3.563 Dia.)....	517829
Standard (3.564 Dia.)....	517830
.005 inch oversize.....	517832
.010 inch oversize.....	517822
.020 inch oversize.....	517823
.030 inch oversize.....	517824

The new type pistons should also be installed according to instructions given for installing the early type.

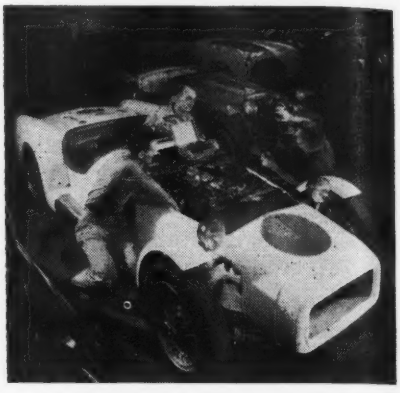
It is not enough to be busy; so are the ants. The question is, what are we busy about. *H. D. Thoreau*

The Excalibur J, an American Sports Car

The Excalibur J is a domestic sports car on a Henry J chassis. Two completed cars have been in competition from since late 1952—one powered with a modified Willys F-head engine—one powered with a modified Henry J L-head engine. The first prototype car was run at the Janesville Airport races in July of 1952.

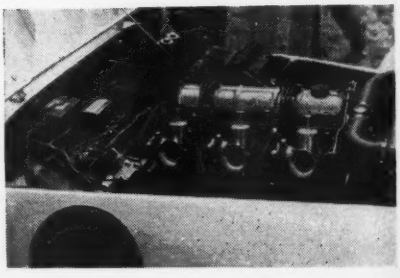
The Excalibur J, one year from the date of prototype completion, evolved into a recognized competition sports car. Through continuous re-engineering and refinement the car has outperformed many foreign cars. Yet the original concept of utilizing the basic Henry J chassis and power plant remains intact.

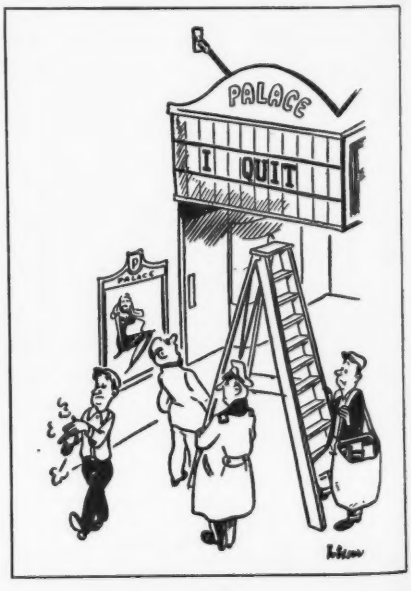
A standardized version of this automobile could reach the public with the conventional three-speed transmission and overdrive capacity of more than 100 mph. The touring complement consists of the required windshield, top, side curtains and so on, prescribed by the international formula. A competition set of accessories could be made available for the stock car to complete the vehicle for competition use.



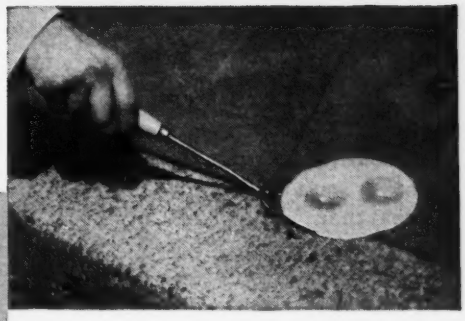
Above: Readying the Excalibur J prior to a race. This car has chalked up some enviable marks in competition since its first race in 1952.

Below: View of the F-Head engine installed in the car. Note the use of three carburetors.





When it's this hot...



and you'd like
to feel like this...

come in and "turn on the cool"

The air conditioner offered today in Chrysler Corporation cars is designed and manufactured by Airtemp, one of America's foremost leaders in air conditioning. The high capacity and efficiency the Airtemp unit achieves have placed it far in the lead in today's car air conditioning market. One: its 300 cubic feet (2 carfuls) of cooled, dehumidified, filtered air circulated every minute is fully ⅓ more than other units. Two: large louvered vents sweep air gently throughout the entire car providing a wonderful even blanket of cool, rather than chilly spots of air. Three: it cools constantly without annoying let-ups at slow traffic speeds. The traditional Chrysler Corporation superiority evidenced in this fine air conditioner makes us proud and happy to invite American motorists everywhere, who are looking for the last word in car comfort, to "come in and turn on the cool!"

Wonderful things keep coming your way from

PLYMOUTH · DODGE · DESOTO · CHRYSLER · IMPERIAL

***...products of* CHRYSLER CORPORATION**

Weather machine tests paint at GM

General Motors researchers have built a "Little Florida" that weathers auto paint 20 times faster than nature and promises to give new clues to keeping your car shiny longer.

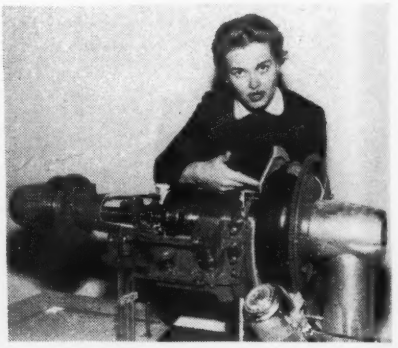
Ordinarily, nature needs from six months to a year, even in severe weather, to dull a car. With the new device, an experimental lacquer or enamel can be changed at once if it shows signs of "chalking" quickly.

Thousands of outdoor tests at GM's Florida Test Field near Miami and at other sites have labeled sunlight and dew as the worst enemies of your car's showroom shine. "Little Florida" thus has both an artificial sun and dew supply.

The sun is a 1,200-watt high pressure mercury arc lamp. The dew is water vapor condensed when cold water passes through a metal box on which test panels are clamped.

Resembling a lottery drum, the entire unit is about five feet across. Paint panels are fastened on the inside wall around the "sun."

The new weathering device will help researchers study the chemical reactions that take place and, as a result, more weatherproof finishes can be devised in the future.



A LADY ENGINEER, Lucille Pieti, demonstrates and explains in simple language the technical side of the Plymouth for television viewers. Employed by the Chrysler Corporation, she is the only known lady automotive engineer in the country.

Rowland F. Kirks joins NADA Saff

Appointment of Dr. Rowland F. Kirks as NADA Legislative Counsel was announced by Frederick J. Bell, NADA executive vice president.

A former Assistant Attorney General of the United States, Dr. Kirks resigned as President of National University in Washington to accept the appointment as council for the National Automobile Dealers group.

B-W Announces New Power Brake for Cars

Marvel-Schebler Products Division of Borg-Warner Corp. is manufacturing a new power brake for aftermarket use. Called the "Feather Touch," the unit is said to be compact, simply designed and can be installed on cars with either high or low brake pedal. The power brake lists for $37.25, not including installation charges.

Square D Starts Expansion Plan

As part of its new expansion program Square D Company will construct a new 60,000 sq ft manufacturing plant and regional sales office in Royal Oak, Mich. To be located on a 19-acre site in the Detroit suburb, the plant will cost about $750,000. Since the end of World War II Square D has spent more than $10 million on expansion programs.

N. Y. adopts vehicle inspection

Late in April Governor Thomas E. Dewey signed into law a legislative enactment providing for periodic inspection of all motor vehicles in the State of New York. Destined to start in September, 1955, the inspection of vehicles throughout the state will require approximately 1,600 state-licensed private inspection stations. The Commissioner of Motor Vehicles has authority under the new law to determine what garages will be issued licenses, with minimum requirements including proper equipment and adequate staff to be described on each application.

No fixed fee, to be paid by individual motorists for each inspection, has been specified thus far. Garages will be authorized to charge whatever they consider appropriate; however, all rates will be subject to approval by the Commissioner. Based on existing fees collected in other states with a similar type of inspection program, an estimate of probable charges for each vehicle would be from $.75 to $1.50 in most areas.

BACK TO THE SOIL goes this 1929 Overland. The old gray mare of the auto world, greatly changed, now pulls a plow on this farmer's acre of land.

Legion Receives "Pershing Dodge"

An historic Dodge, the first passenger car to be used by the U. S. Army as a combat vehicle, was presented to the National Commander of the American Legion recently by William C. Newberg, Dodge president.

Newberg turned over title to the ancient but still serviceable vehicle to Arthur J. Connell, the Legion's National Commander, at a dinner ceremony in Detroit.

The car, which research has proved to be the first passenger vehicle used by U. S. armed forces in combat, began its military career in the Mexican Punitive Expedition of 1916. The same Dodge is also believed to have been the staff car of General John J. Pershing, who headed U. S. forces on the Mexican Expedition.

The "Pershing Dodge" has been restored to original condition and equipped with a Michigan historical plate, but is still finished in the same olive drab Army paint that it wore during the Mexican campaign and still carries its Army vehicle designation "U.S.A. 111509" on its hood and the words "For Official Use Only" lettered on its front doors.

The numbers on the car are from a later date since it went into Army service before the Army's Motor Transport Corps was established—an event which took place Sept. 1, 1918.

In addition to being used by General Pershing, the car also was used by another famous Army leader during its service in Mexico.

General George S. Patton, Jr., the famous "Blood and Guts" General of the Army's armored units in Europe during World War II, was just a Lieutenant during the Mexican Expedition in 1916, but he was already displaying the courage and daring tactics which were to make him a legendary figure on other battle-fronts.

The story is told in a dispatch filed from El Paso, Tex., May 27, 1916, by A. H. E. Beckett, which appeared in MOTOR AGE magazine. War Correspondent Beckett wrote:

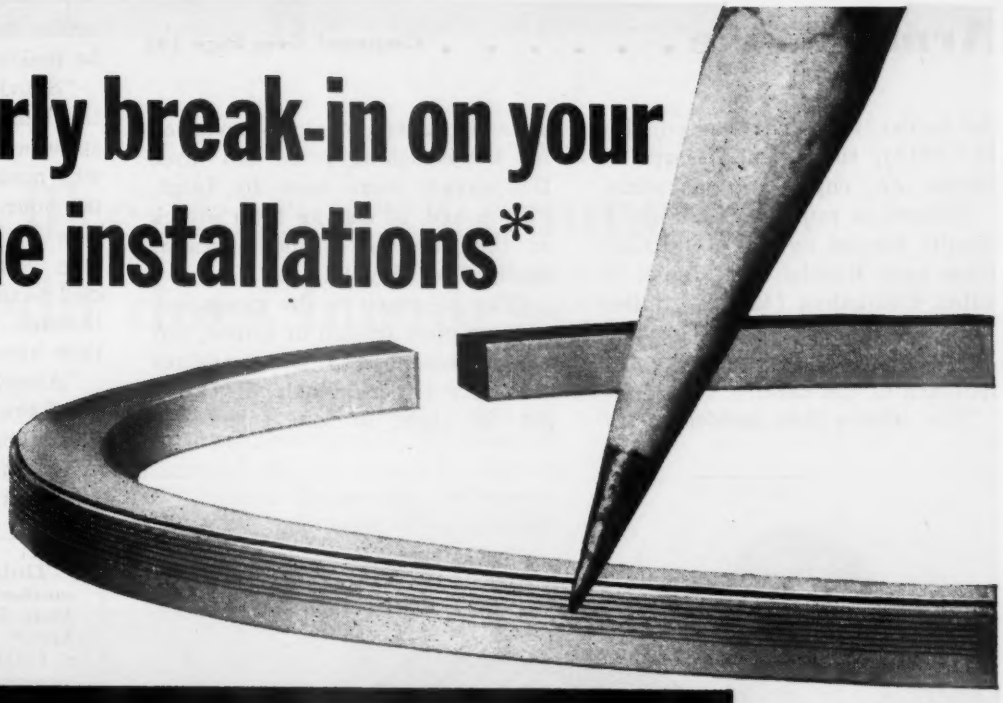
"Some day, perhaps, there will be a poet who will write of the modern version of the 'Charge of the Light Brigade,' but he will not write of horses, but of motor cars. In the European War, the motor vehicle has been used extensively, but it remained for the men of 'Black Jack' Pershing's brigade now in Mexico to utilize ordinary touring cars for a charge.

"The story of a motor charge that will go down in history as the first of its kind is just getting to

(*Continued on page* 144)

Get early break-in on your chrome installations*

install the full chrome ring set with all the answers



AMERICAN HAMMERED

Pre-seated Krome-Oil

PISTON RING SETS

GET IT FROM YOUR JOBBER

***Pre-seating assures fast oil control—here's why**—Pre-seating is a factory-applied lapping process for the top groove compression ring which is equivalent to 300 to 500 miles of *actual* engine operation. The smooth, even bearing of the narrow land contact surface (portion of ring magnified in photo) guarantees early break-in, fast oil control.

Read what others who have installed Krome-Oil say:

"We have been using your Krome-Oil ring sets for the past six months and find that they give very excellent results.

"The two most noticeable features are the very short length of time required for seating and the almost instant oil control achieved.

"We highly recommend the use of Krome-Oil sets in cars of all makes and am writing this letter because of the remarkable superior qualities of your product."

BURNSIDE MOTORS, INC.
East Hartford, Conn.

"We find American Hammered KO sets only Chrome sets that give fast seating and early oil control for customer satisfaction."

SUEDA BROS. AUTO SERVICE
Torrance, Calif.

"I have used about every brand of rings available in this area and lately have used several sets of one brand of chrome rings. I had quit using them because customers complained of taking too long to seat. Since using your pre-seated Krome-Oil rings I have had wonderful success with immediate seating and exceptionally good oil control even in real tough jobs. I am 100% sold on your Krome-Oil rings."

ROSSI BRO. SERVICE STATION
Rankin, Pa.

American Hammered

AUTOMOTIVE REPLACEMENT DIVISION
2001 Sanford Street, Muskegon, Michigan
Manufacturers of American Hammered Automotive Replacement Piston Rings
A Division of Sealed Power Corporation

Remember profit-packed American Hammered
Power-Plus Service • Koetherizing
GI-60 Groove Insert • Dry Film Lubricant

Army Dodge . . . . . Continued from Page 142

the border, though it was on May 14 (1916), that Lieut. George S. Patton, Jr., engineered his stunt.

"Efforts to round up a bunch of bandits headed by Col. Julio Cardenas near Rancho San Miguel de Rubia, Chihuahua (Mexico), failed when cavalry was used. The bandits seemed to get word of the approach of the cavalry.

"The officers then decided to try a faster means of transportation for the attacking force and three Dodge cars were used by Lieut. Patton and 15 men in their attack on the Cardenas headquarters at daylight on May 14.

"The approach to the ranch was over an open stretch of a mile, but the lieutenant had his machines ready for a speedy dash when they got in sight of the farmhouse where the bandits were believed to be making their headquarters.

"Shoving their gears into high, the chauffeurs cut open for high speed and the dash over the desert was made at better than 40 miles per hour. The machines were within a few yards of the ranch before they were detected and then half-clad bandits made their appearance through doors and windows as they streaked for cover.

"American marksmanship, however, proved too great a handicap for the bandits. Col. Cardenas was killed, with two of his lieutenants. The rank and file, to the number of half score, made good their escape, but the band has been effectively dispersed through the death of the leaders.

"'We couldn't have done it with horses,' said Lieut. Patton. 'The motor car is the modern war horse.'"

Fixing the exact dates of the appearance of Dodge cars in the Mexican Expedition is a difficult task. Obviously, Dodges were in action on May 14, 1916, when Lieut. Patton made his momentous "motorized charge."

Pancho Villa, the leader of the Mexican insurgents, made his first attack on U. S. soil on March 9, 1916, at Columbus, N. M. The following day, President Woodrow Wilson ordered General Pershing to head a punitive expedition to Mexico.

Just two weeks later, according to official Army records, General Pershing requested six Dodge cars for use in Mexico. He was granted authority to obtain the cars on April 2nd.

An April 22nd (1916) dispatch from War Correspondent Beckett to MOTOR AGE magazine states: " . . . General Pershing used a big six-cylinder for a while, but now he is using a four. And let me tell you that the factory engineers have never even thought of such tests as 'Black Jack' is now giving the cars.

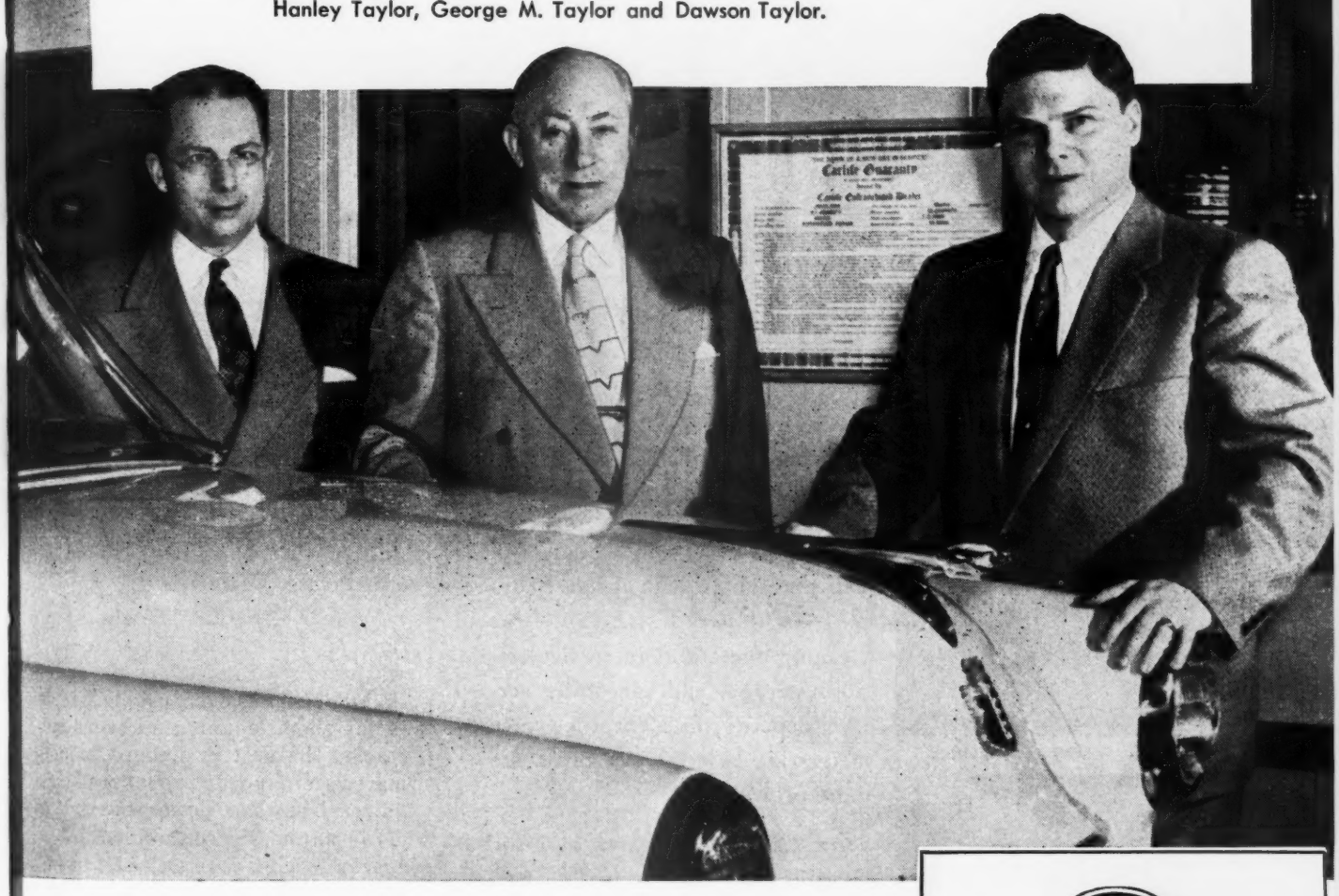
(*Continued on page* 149)

Little boy: Daddy, why do mother's friends always bring their knitting when they come here?

Father: Well, it gives them something to think about while they talk.

"We like the way Commercial Credit does business..."

says **MR. HANLEY TAYLOR,** President of Taylors' Incorporated, Detroit Dodge-Plymouth Dealer. This company developed and pioneered the now nationally popular CARLIFE GUARANTY. Pictured left to right, are Messrs. Hanley Taylor, George M. Taylor and Dawson Taylor.



"COMMERCIAL CREDIT'S popularity here is hardly news. We've been *sold* on them for 20 years. Their farsightedness, fair dealings and splendid cooperation down through the years have proved invaluable to our success. COMMERCIAL CREDIT's entire philosophy of *taking care of the customer* ties in perfectly with our own emphasis on building customer good will with our "Two Year or 25,000 Mile *Carlife Guaranty*." This patented Carlife Guaranty was originated by our Chairman, George M. Taylor and is now used by over 4,000 dealers."

COMMERCIAL CREDIT DEALERS ARE Successful DEALERS

Let us show you how COMMERCIAL CREDIT's broad experience, large resources and complete financing facilities can contribute to your success. Write, wire or phone your nearest COMMERCIAL CREDIT office today. You'll get prompt action.

COMMERCIAL CREDIT PLAN

COMMERCIAL CREDIT CORPORATION

A service offered through subsidiaries of Commercial Credit Company, Baltimore... Capital and Surplus over $150,000,000 ... offices in principal cities of the United States and Canada.

New Products

Continued from Page 126

380. Promotion Kit

Arvin Industries, Inc.: A promotion and merchandising kit to arouse customer interest in its recently announced re-circulating car heater is being made available by this company.

Principal piece of the new kit is a large "working display" which enables the dealer to show the heater as it appears installed in a car. Built of white enameled tubing, the display has a full-color background against which an actual heater is exhibited.

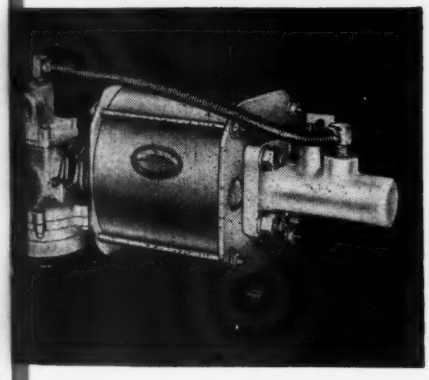
381. Car Washer

Weaver Mfg. Co.: The Main feature of this new automatic car washer, according to its maker, is that it consumes no usable space in the shop. Mounted on overhead tracks, the unit is claimed to use less water and detergent and requires less man power by virtue of its automatic wash control. No special wiring is required for installation, it is claimed.

382. Car Lift

Watervliet Tool Co.: The pneumatic safety lift introduced by this company is said to feature a lifting arm that clears bumpers as low as 8½ inches from the floor. The lift has double tanks and safety latches, either of which is capable of lifting and holding the load, it is claimed. It is further stated that the car can be lifted from either side, rear or front with this portable "jack."

Easy does it



with BORG-WARNER "FEATHER TOUCH" POWER BRAKES

Designed for Service Shop Installation on Most '46 to '54 Model Cars

By now, most car owners are aware of the many advantages of power brakes. Smooth, instant response to light pedal pressure . . . quicker, shorter, surer stops . . . less strain, less fatigue, greater driver comfort.

But up until recently, power brakes were available only as factory installed optional equipment on certain makes of new cars. Now—thanks to Borg-Warner engineering—B-W "Feather Touch" Power Brakes can be installed in an hour or so on most '46 to '54 models of all popular makes of cars.

As with scores of other Borg-Warner products, this new unit is engineered out of deep experience with the automotive industry's high standards. It has a minimum of wearing parts, requires no lubrication, is unaffected by changes in climate. And it is the industry's smallest, most compact unit, low in price, dependable in performance.

Designed and built by B-W's Marvel-Schebler Products Division, the new "Feather Touch" Power Brake is another example of Borg-Warner's "design it better—make it better" tradition. One more in a long list of B-W contributions to the driving safety, comfort and pleasure of the motoring public.

B-W engineering makes it work B-W production makes it available

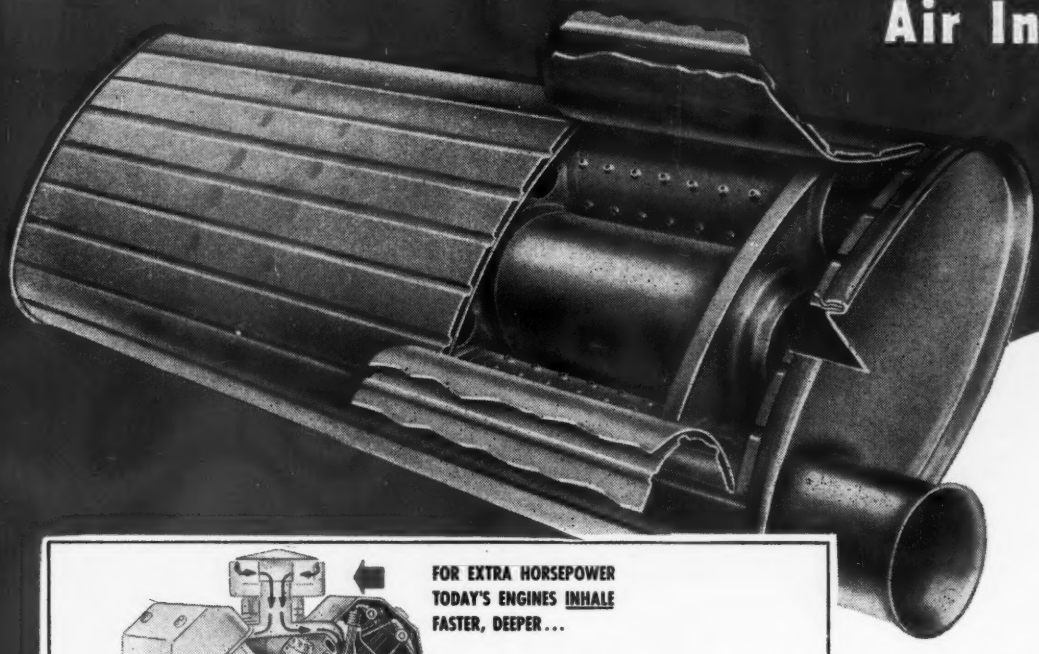
ENGINEERING B-W PRODUCTION

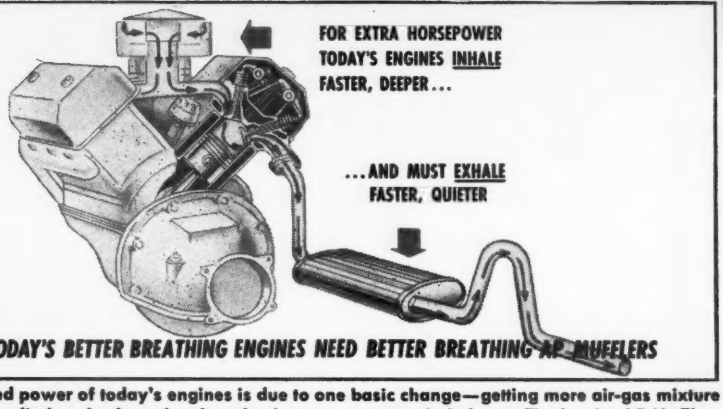
Almost every American benefits every day from the 185 products made by

BORG-WARNER

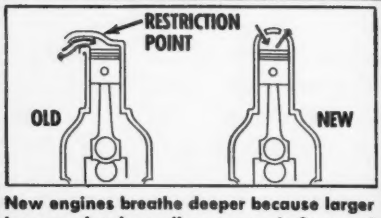
THESE UNITS FORM BORG-WARNER, *Executive Offices, Chicago:* ATKINS SAW • BORG & BECK • BORG-WARNER INTERNATIONAL • BORG-WARNER SERVICE PARTS • CALUMET STEEL • CLEVELAND COMMUTATOR • DETROIT GEAR • FRANKLIN STEEL • HYDRALINE PRODUCTS • INGERSOLL PRODUCTS • INGERSOLL STEEL • LONG MANUFACTURING • LONG MANUFACTURING CO., LTD. • MARBON • MARVEL-SCHEBLER PRODUCTS MECHANICS UNIVERSAL JOINT • MORSE CHAIN • MORSE CHAIN CO., LTD. • NORGE • PESCO PRODUCTS • REFLECTAL • ROCKFORD CLUTCH SPRING DIVISION • WARNER AUTOMOTIVE PARTS • WARNER GEAR • WARNER GEAR CO., LTD. • WOOSTER DIVISION

Engineers Increase Horsepower by Improving Better Breathing AP Mufflers Air Intake

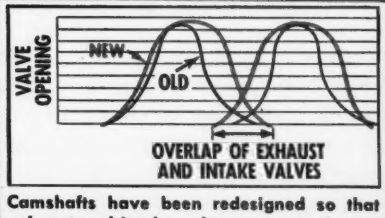




Increased power of today's engines is due to one basic change—getting more air-gas mixture into the cylinders. In short, they breathe deeper . . . must exhale faster. That's why AP Mufflers have been redesigned to breathe better . . . to exhaust this greater quantity of gas silently and with less back pressure.



New engines breathe deeper because larger bores and valves allow more air flow and because overhead valves remove restricting angles of L-type heads, permit both incoming mixture and exhaust to get in and out faster.



Camshafts have been redesigned so that exhaust and intake valves are open longer at the same time, thus causing tremendous "run-down" noises and creating new muffling problems—which have been solved by better breathing AP Mufflers.

This decal will identify you as the specialist which national advertising has told motorists to depend on for muffler service.

More horse power
More sales power
with AP

Army Dodge . . . . . .

Continued from Page 144

"Pershing and his staff ride in nine cars and these cars are on the go 18 hours out of the 24, while the mechanics have a chance to do their overhauling in the other six.

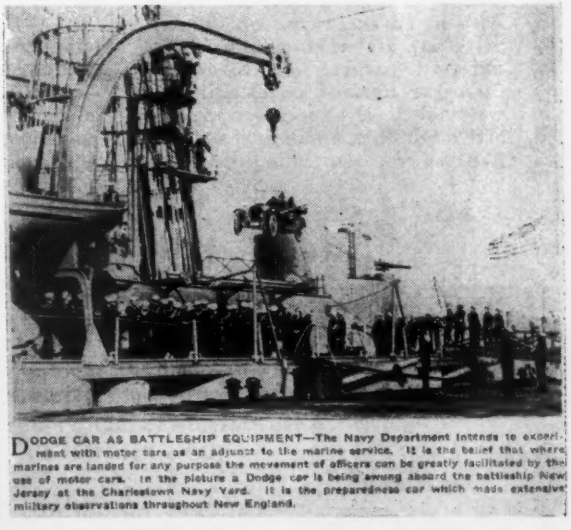
"There are no roads worthy of the name. The cars have to be driven through sand, or loose rock, up and down grades and even across mountain streams. The staff cars stand up remarkably well, though there has naturally been a little trouble with springs. Gen. Pershing has ordered that only Dodges be used by his staff.

"Cavalry can't keep up with the motor car, even over such rough country as has been traversed in Mexico. If the campaign was likely to be prolonged, it is certain that the chief mode of transport would be motor cars.

"Chasing Villa with Pershing in motor cars will be remembered all their lives by the men who have had a chance to be up with the advance."

From Gen. Pershing's original request on March 31, 1916, for "six Dodges" for the Mexican campaign, the total in service in Mexico by July 15, 1916, had grown to "nearly 250," according to a picture caption in the July 16th (1916) issue of *Automobile Topics* magazine.

The success the Army enjoyed in using Dodge cars during the Mexican campaign caused interest on the part of the Navy, according to a picture caption in the July 20, 1916, issue of MOTOR AGE magazine.



DODGE CAR AS BATTLESHIP EQUIPMENT—The Navy Department intends to experiment with motor cars as an adjunct to the marine service. It is the belief that where marines are landed for any purpose the movement of officers can be greatly facilitated by the use of motor cars. In the picture a Dodge car is being swung aboard the battleship New Jersey at the Charlestown Navy Yard. It is the preparedness car which made extensive military observations throughout New England.

The caption states: "The Navy Department intends to experiment with motor cars as an adjunct to the Marine service. It is the belief that when Marines are landed for any purpose the movement of officers can be greatly facilitated by the use of motor cars. In the picture a Dodge car is being swung aboard the battleship *New Jersey* at the Charlestown Navy Yard."

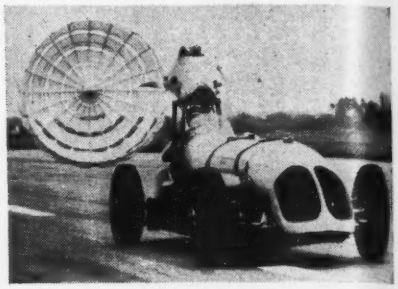
Nash Adds 32 Outlets

The fight by independent car companies which have been joining with one another to gain a bigger share of the market is gaining new impetus. Nash, which recently consolidated with Hudson into American Motors Corp., added 32 new car dealers in 16 states during the first 10 working days in June. Packard Motor Car Co., in an effort to penetrate the "open point" market areas, hopes to add 200 dealers within the next year.

Roof Air Conditioner For Station Wagons

A.R.A. Mfg. Co., Fort Worth, has come out with an air conditioner that can be installed under the top of a station wagon. Most air conditioners utilize trunk space and, therefore, station wagons had to do without them so far.

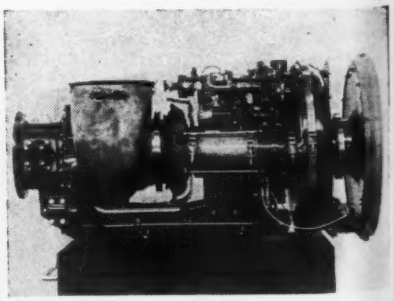
The new unit, it is claimed, does not interfere with vision or operation of the windows. Price of the roof air conditioner is $695 installed.



AN EIGHT-FOOT 'CHUTE, designed to slow down landing aircraft, is demonstrated by a racing car in Surrey, England. Shown at maximum spread, it can be retracted into a case electrically.

Building Expansion Goes on at Ford

Ford Motor Company this fall will start construction on three new buildings and an annex to a present one to be used for its Engineering Staff's Research and Engineering Center in Dearborn. The program is the last phase of an $80 million dollar expansion move started in 1947, and is expected to add one million square feet of space to existing facilities. The three new structures will include a body engineering unit; a scientific laboratory and research building; and a cafeteria. The laboratory and research unit will have two separate wings which will be joined by a central library and main lobby. In addition to the new buildings, an annex will be linked to the Engineering Administration building. Its 24,000 square feet will be used for transmission department activities.



RIGHT SIDE VIEW of the new Boeing Gas Turbine Engine. The engine produces a maximum of 270 hp at 3,100 rpm; its rated power is 240 hp at 2,900 rpm.

at your call—

Nationally Advertised Brands of Genuine Quality

- **for cars and trucks of all makes**
- **from one completely cooperative and time-tried source**

Allied A.P.C. *
American Brakeblok
BALKAMP
Belden
BRIDGEPORT
BRIGGS
BROWN LIPE
CELORON
DETROIT
DITTMER
DUCKWORTH
ECHLIN
Federal
Allied GRAPHO
MARTIN-SENOUR
MicroTest
Modac
Monmouth
New Britain
Allied PRECISION
PURITAN
RARITAN
Allied RAYMOND
Soundmaster
STANDARD
Spicer
Thomson
TRICO
UNITED
VISALL
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ZOLLNER

● You'll save *time*—you'll save money—by concentrating your parts purchases with your nearby NAPA Jobber. Because he is part of the industry's most highly organized and most comprehensive parts distributing system, he is able to give you an extraordinary service. Your NAPA Jobber *is* a good man to know—and the better you know him, the more it will profit you.

N·A·P·A
National Automotive Parts Association
Assurance of Quality

National Automotive Parts Association, Detroit, in behalf of the thousands of independent

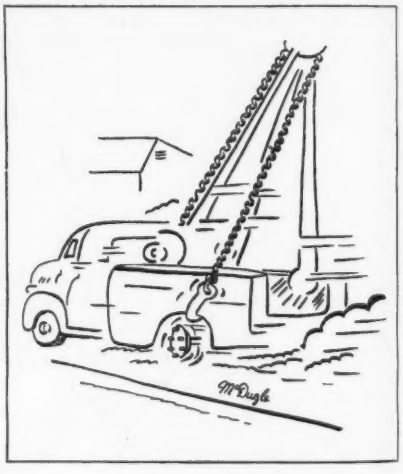
N·A·P·A JOBBERS

who supply the automotive repair trade from coast-to-coast with these*—and many other—nationally advertised brands of quality automotive parts and supplies.

Fordomatic . . . . . Continued from Page 42

½ inch by 3 inch by ¼ inch thick; a ¼-inch hole drilled through one end and a chain or heavy wire attached through the hole so that when the adjustment is completed the gage block can be pulled out easily. The adjusting screw should now be turned in and tightened to 10 ft. lb. torque, with a torque wrench. Back the adjusting screw off one complete turn, holding the adjusting screw stationary; tighten the lock nut or torque to 20-25 ft. lb. Remove the gage block; replace the oil screen over the pump inlet tubes. Replace the oil pan to the transmission case, using a new gasket; tighten pan bolts or torque to 10-13 ft. lb. Replace the transmission oil plug or dip stick tube to the right side of the oil pan and refill the transmission to the proper level. Check for leaks. If the drained oil is to be reused, make certain it is strained and cleaned before refilling. Refill at the dip stick location.

To adjust the rear band, move the floor mat out of the way so that the cover plate located on the right front floor is accessible to work. Clean the cover plate and remove the screws on some models, or pry out the rubber cover plate with a screw driver on later models. Loosen the rear band adjusting screw lock nut a few turns with a ¾-inch socket wrench. Tighten the adjusting screw 5/16-inch square to 10 ft. lb. torque; loosen and retighten, if necessary to be as close as 10 ft. lb. torque as possible. Back off the adjusting screw 1½ turns, holding the adjusting screw to keep it from changing position, and tighten the lock nut, or torque to 30-35 ft. lb. Check the fluid. Replace floor mat.



To check the proper oil level, run the engine for a few minutes, put the selector lever in parking position and check the dip stick level. To check adjustment, make the stall test as follows: connect an accurate tachometer and make certain the engine is idling at 425 rpm at normal operating temperature. Apply the parking brake and foot brake firmly, move the lever to drive position and press the accelerator to the floor. The engine speed should be 1400-1600 rpm. If the engine speed is below 1400 rpm, tune the engine and repeat the test. If the engine speed is above 1600 rpm, release the accelerator immediately, never more than a few seconds, because it indicates that the front band or clutch is slipping.

A special message to all gasoline dealers

(EXCEPT OUR OWN)

Would you like to double your gallonage?

L. H. Bowing of Richmond, Indiana, doubled his gallonage—after he switched to selling Blue Sunoco. It happened to Theodore H. Benoit of Coventry, R. I., when he switched. And to James J. Hudd and Kasmer Liska of Warrensville Heights, Ohio.

In fact, Sunoco dealers—on the average—pump twice as much gasoline as competitive dealers. And today the opportunity is greater than ever.

New Gasoline—New Oil

Right now, Sunoco dealers have two great *new* products to sell. New Hi-Test Blue Sunoco gasoline has been boosted to a new high in anti-knock power and over-all performance. New Blue Sunoco gives premium quality at regular gas price—is a new challenge to all premium-priced brands. It's America's greatest gasoline value!

In addition, Sun has just introduced a new kind of motor oil that car-makers asked for—new Sunoco Special Hi-Compression Motor Oil. This new motor oil controls knock, gives any gasoline more power. These new products are bringing thousands and thousands of new customers into Sunoco Stations.

Another good reason why Sunoco dealers have outsold their competition over the years is because Sun believes in strength, not numbers. Our policy guards against overcrowding—Sunoco dealers compete with other dealers, not with each other. It is possible that a Sunoco dealership may be available and that you can qualify for it. If interested, call our local office or write us direct.

SUNOCO

SUN OIL COMPANY PHILADELPHIA 3, PA.

Down Payments Getting Thin

by Herman Schaefer, Auto Dealers' Assn. of Indiana, Inc.

Here is some late information on what is transpiring in the extension of Credit and Terms being given on Installment Contracts. We believe that this information is indicative of serious dangers to the future of car dealers and that they should at all costs use every precaution to stem the tide of these tendencies even if it means a more positive attitude toward manufacturers who seem to be the principal benefactors of the present high volume of new car sales.

The following information was obtained from several major and independent financing companies:

a) The purchase of used car paper for the month of May dropped 26% below used car paper purchases during the previous month of April;

b) The purchase of new car paper in May increased above that bought in April.

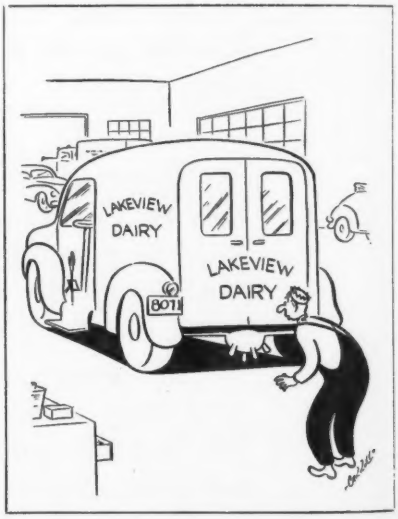
A and B show a backing up of used car inventories at a time when such sales should, according to the history of the business, be increasing. A further testimonial to this fact may be gained by the cursory survey of used car lots which are running over with merchandise.

When will this surplus of used car inventories be liquidated if not during the height of this selling season?

c) Approximately 41% of non-recourse paper is for 30 months (2½ years).

d) Approximately 19% of recourse paper is for 30 months.

We do not attempt herein to discuss the merits or shortcomings of either recourse or non-recourse paper. That is not our purpose . . . but we do want to point out that apparently dealers on a non-recourse basis are more willing to extend long terms than those on a recourse basis. Whether their increase in 30 months' deals is due to greater allowances for trades because they don't fear repossessions or because of a lack of sales effort to sell shorter terms, thus following the lines of least resistance, is not known . . . but assuredly this abnormally high extension of terms bodes ill for future sales.



e) 13% of recourse paper is with less than 25% down payment.

f) 3% of non-recourse paper is

(*Continued on page* 156)

...The "55" Tomorrow's Jack .....TODAY!

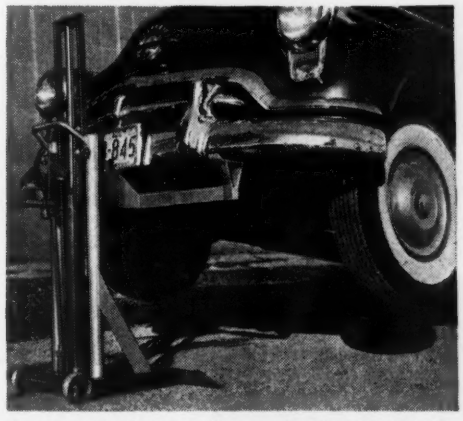
Contact and UP in less than a minute!

suggested dealer net $79.85

Again Hein-Werner is FIRST with the latest important development in jacks – the new Hydraulic "55" Twin Saddle Service Jack. You benefit from these outstanding advantages:

- **Hydraulic power – can be used anywhere**
- **Steady lift under complete control of the operator**
- **Three positive automatic safety locks**
- **Minimum pumping effort**
- **Adjustable saddles with safety stop**
- **Spring suspended positioning roller**
- **Sturdy malleable iron wheels**
- **Rustproof guide posts and rollers**
- **Safety valve set at 1½ tons to prevent overloading**

Order your "55" today from your Hein-Werner Jobber. Be among the first to get immediate delivery on this easy-to-work-with Hein-Werner Hydraulic Service Jack.



Contact and UP in less than a minute! The "55" lifts all cars and light trucks by the bumper to provide easy access for tire, brake, front end and car washing service —it's truly "TOMORROW'S JACK TODAY".

HEIN-WERNER CORPORATION
WAUKESHA, WISCONSIN

Hein-Werner HYDRAULIC JACKS

Down Payments . . . . Continued from Page 154

with less than 25% down.

In face of rising used car inventories it is almost inevitable that prices will decline. If so, isn't the 13% of sales being made by recourse dealers likely to result in heavy repossessions?

Less than 25% down payment represents a thin equity of the purchaser who may find it more profitable to let his purchase be repossessed and buy anew than to continue his payments. Though the foregoing indicates some tendencies current among the whole trade, it is also evident that there are some underlying reasons for it and some remedial action that can be taken.

FIRST: Every dealer as an independent agent can and must learn to refuse to become a part of the manufacturers' registration race by refusing to take more cars than his market can absorb profitably.

SECOND: Let no competitors' conduct so disrupt your sound logic that you get mad and resort to following his tactics. He may have a product with greater public acceptance or he may be committing hari-kari. In either case, you need not both engage in a war in which there is no victor.

THIRD: Don't take the prospect's word literally.

In a recent case which we traced to its conclusion, we found one customer who said a competing dealer had offered $400 for his trade-in. The dealer who was so informed had offered $300 and lost the deal. Investigation proved the competing dealer, who subsequently delivered a new car to this prospect, actually allowed only $304 for the trade-in.

In 1900, all of the hard-surfaced roads in the United States would not have reached from New York to Boston.

The moral being that to ask a prospect how much he had been offered elsewhere, thereby leading the customer to commit himself, usually with an exaggerated price, becomes too embarrassed to do business with you even if the offer you make is equal to or slightly better than what he actually was offered elsewhere.

Pay more attention to whom you are selling and to the sales techniques you use than to the conduct of your competitors.

The unreasonable extension of credit, as evidenced above, is indicative of a competitive condition so serious as to compel dealers to give undue discounts or trade allowances in such amounts that profits are virtually extinct.

It is unrealistic for manufacturers to ignore such conditions and to leave dealers stand alone to suffer the full impact of these losses. If manufacturers insist upon continuing the present high rate of production, then they should participate by reducing their profits just as dealers are being compelled to do.

Here's a big handful of sanding satisfaction- TUFBAK®

the wet-sanding paper that cuts costs 'way down

Dip a quarter-sheet of TUFBAK in a pail of water, and put it to work on a priming coat — you'll get a new idea of sanding speed, of clean, smooth cutting, of effortless results. TUFBAK simply wipes off primer imperfections, and leaves just the right tooth for a beautiful finished job.

TUFBAK's waterproof paper backing retains the original flexibility, and its water-resistant bond never lets go of the sharp, hard silicon carbide grains. Ask your jobber for TUFBAK.

KEEP ON FILE this handy booklet giving sizes, grits, description of all our body shop products. Write for your copy to Behr-Manning, Troy, N. Y., Dept. MA-7.

In Canada: Behr-Manning (Canada) Ltd., Brantford.
For Export: Norton Behr-Manning Overseas Inc., New Rochelle, N. Y., U. S. A.

BEHR-MANNING® CORPORATION *division of NORTON Company*

▲ COATED ABRASIVES
▲ SHARPENING STONES
▲ PRESSURE-SENSITIVE TAPES

A-12

Profit with all these BEHR-MANNING products

SPEED-WET® & METALITE® FIBRE DISCS
For fast, dry or wet sanding. OPENKOTE® or CLOSEKOTE®. All grits and sizes.

BEHR-CAT® MASKING TAPE
Goes on easy, fits snugly around curves, sticks tightly, and strips off clean.

BEHR-CAT ADHESIVES AND SEALERS
Meet all body shop needs for adhesives, fillers, sealers, caulking compound. A complete line.

Union Turned Down by Kaiser

After careful consideration, Willys Motors, Inc., has decided to decline the offer of Local 12, UAW-CIO, to serve as Ohio distributor for Willys and Kaiser products. It gave no reason for turning down the proposal. It is believed, however, that the decision was based in part on the belief the union lacked the experience to sell cars.

To be able to get into the automobile business, the union planned to buy out Toledo's present Kaiser-Willys distributor Laurel C. Worman, Inc., located in Toledo, which will continue in that capacity. The union had offered $300,000 to set up the proposed company and had hoped to eventually capitalize it at $1 million. It had already filed incorporation papers for a new company.

While happy over the support the union move received from employes and local businessmen, the company felt once such business was set up it would bring the union and management closer together, and it wasn't sure that it wanted such intimacy between two traditionally opposed groups. The original union proposal was submitted on May 14.

Ad Outlay of Big 3 Hits $66 Million

The Big Three car companies last year spent close to $66 million on national newspaper advertising. Leader in the amount put out by any company in all types of industries was General Motors with $32,944,000 in ads, about 63 per cent above the 1952 figure.

Ford Motor Co. rose from fifth to second place, spending $18,278,000 last year, an increase of 68 per cent, while Chrysler moved up from fourth to third spot. Chrysler spent 24 per cent above 1952.

Phila. Organizes Old Timers Group

The Philadelphia Metropolitan Council of Automobile Old Timers was organized at a recent luncheon, with an attendance that filled the ballroom of the Barclay Hotel.

The nominating committee composed of Jack Fassitt, Jim Janes, president of Phila. Auto Trade Assn., and Frank Tighe, Editor of MOTOR AGE, presented the following slate which was approved unanimously without further nomination: George H. Thornton, president of Thornton-Fuller; Herman P. Schade, Schade Sales Co., vice-president; R. A. Harp, president, Auto Equipment and Service Co., secretary and treasurer.

Clifford L. Bishop, President of the Old Timers; A. A. Lally, President of the New York Metropolitan Council; Frederick H. Elliott, Secretary; and C. Ray Palmer, Treasurer, welcomed the Philadelphia Council into the national organization. The honored guest was Willard F. Rockwell, Director of the Automobile Old Timers and one of the prime movers in establishing the council of Western Pennsylvania.

HOLMES 650 Model—Built for Heavy-Duty Work yet is fast, flexible enough for light cars and trucks. Wrecker—$2,250 and up.

"*Only* HOLMES gives you such TRIED, TESTED and PROVEN Performance"

It's not unusual to see a shop operating three, four and often more Holmes wreckers. The demand for fast, modern road service is today such that many have found it highly profitable to operate a fleet of wreckers with units of various size and capacity to handle *any* and *all* types of road emergencies. The fact that these shops use Holmes Equipment *is* in itself, an endorsement of Holmes working efficiently. It shows that those who actually know best what *is* desired in a wrecker unit recognize the advantage of using Holmes Equipment. Today, HOLMES WRECKER Equipment is widely accepted as the safest, most satisfactory yet built for handling of wrecked and disabled motor vehicles. Every feature has been thoroughly tried, tested and proven on all types of terrain and under *every possible working condition.* Holmes now offers 5 new and improved models, each varying in size and capacity, which range in price from $330 up. *REMEMBER: "BIG PROFIT JOBS DON'T DRIVE IN. THEY ARE TOWED IN."* See your jobber for details or write factory today.

ERNEST HOLMES CO. - Chattanooga, Tenn.

OLMES 525 Model—All-purpose wrecker with speed and flexiity for any light job, yet has ample power for handling the erage truck. Wrecker—$1,500 and up.

HOLMES JUNIOR—Ideal for light pick-up, towing and delivery service. Fast, easy to handle in traffic. Economical to operate. Priced as low as $330.

NADA makes major decisions

Major decisions affecting the automobile retailing industry were made by the board of directors of the National Automobile Dealers Association in a recent session in Detroit.

The 54-man board endorsed a bill sponsored by Senator Everett Dirksen (Rep., Ill.) which would permit manufacturers to reinstate antibootlegging clauses in their selling agreements with dealers. Such clauses would do much to eliminate the sale of new automobiles by non-authorized groups.

Plans were also approved for an all-out educational campaign to bring about the scheduled reduction or elimination of the manufacturers' excise taxes on essential automobiles and trucks, as well as other related automotive products.

Approval of the launching, in cooperation with state and local automobile dealer associations, of a series of NADA management clinics was given by the NADA board. These clinics will serve as a method of aiding members in solving management problems.

In view of the perplexing problems facing the industry today, the NADA board meeting was serious and productive.

Israel Firm Seeks Rights to Crosley

Speculation about the ultimate disposition of the tools, dies, and equipment used in the manufacture of Crosley cars was given fresh stimulus by the recent report that the Abena Investment & Development Co., of Israel, is interested in purchasing the facilities and rights from Aerojet-General Corp., Azusa, Calif., subsidiary of General Tire & Rubber Co. An earlier report that General was interested in producing these cars in Israel, and that negotiations were in progress for the supplying of engines by Aerojet, was denied officially by General Tire & Rubber Co.

If the negotiations go through, the Israel firm would build the body and chassis but presumably might have to find another source for engines. General has confirmed that Aerojet has been building versions of the Crosley engine for various industrial uses, including installation in refrigeration units, and marine conversions. They doubt whether the quantities required for the Israel project would make it practical to ship engines overseas.

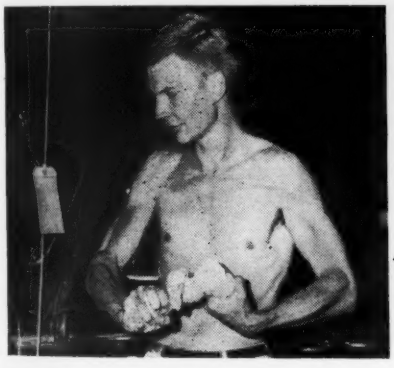
In any event, the Israel firm is said to plan production of Crosley cars and station wagons, building the bodies and chassis in Tel Aviv, at a rate of 50 cars a day. The car is expected to sell for about $1000. News reports also intimate that the company hopes to market these cars in the U.S.A.

Crosley Motors stopped building cars in June, 1952. Shortly thereafter, General Tire acquired control from Powell Crosley, Jr., founder and president. At the time Crosley had an inventory of $350,000 of chassis and body parts on hand. In the interim General Tire has held the parts, tools, dies and machinery in storage.

Demand is Small For Wire Wheels

Wire wheels, both the genuine type which sell for up to $300 a set and the "snapon" imitation discs, have not had much popularity among car buyers. The demand for the "snapon" wheels which were introduced by several car manufacturers last year as factory installed optional equipment is so small that some makers are seriously thinking of dropping them with the next models.

One of the large car makers which saw a rush for wire wheels when they were brought out stocked up with 5000 sets and is still "stuck" with them. Another car division which started offering the genuine wire wheels about two years ago sold only about 1000 sets to date; it equipped only about 3000 cars with the snapon devices out of a total production of almost 400,000 cars.



A DOUBLE SOAKING was taken by C. J. West recently. While he was saving a woman from drowning his car was tagged for parking on the bridge where he left it to make the rescue. The head of the police bureau offered to pay the fine, however.

Ford, L-M to Get Bendix Radios

Bendix Aviation Corp. will supply all of the radios for the 1955 Lincoln and Mercury cars. Ford also reportedly will switch over to using Bendix eight-tube receivers shortly.

Lincoln-Mercury Division and Ford have been using Sylvania eight-tube radios in their cars since 1950. Ford will continue to get its six-tube units from Bendix and Motorola.

Several get new posts at Chrysler

C. L. Jacobson and F. W. Misch were elected vice-presidents of the Chrysler Corporation recently.

Mr. Jacobson, who relinquished the presidency of Chrysler Motor Parts to assume his new duties, has been associated with the company since 1925.

Mr. Misch joined the company in 1926 as a clerk and in 1953 became comptroller.

T. E. Waterfall succeeds Mr. Jacobson as president of the parts division. He has been vice-president and general manager, working up from his start as executive assistant to the general manager in 1941.

Chrysler has appointed three men to serve as investment managers in its new Dealer Enterprise Program; Albert H. Green, L. Sidney Oehring and Dennis A. Buckley—each with many years of experience in all phases of automotive retail management.

De Soto Pushes Factory Delivery

The number of buyers picking up their cars at manufacturing plants has been increasing since the beginning of the year, and factories have been promoting such programs heavily in recent months.

De Soto just recently put into effect a new campaign to encourage customers from distant points to take advantage of the savings offered by delivery at the factory. Keyed to a vacation theme, the program is being promoted through radio, newspaper and television advertising and urges prospects to underwrite travel expenses with money saved on freight charges on a car.

Officials report that factory deliveries of cars at present are at the highest rate of the year. Freight charges on a new car shipped to the West Coast run as high as $400.

Another car manufacturer, Pontiac, which saw an unusual rush of customers from the Pacific coastal states, set up a new 26,400 sq ft building especially for retail customer delivery. The new building has complete facilities for housing and servicing "will call" cars and provides comforts of a first class hotel for out-state buyers waiting to pick up their cars.

StudebakerIntroduces New Utility Vehicle

Studebaker has introduced a new utility vehicle designed to serve either as an ambulance, patrol car or auxiliary emergency car. It is modified from the Conestoga station wagon and will be available in four models—Deluxe Champion, Regal Champion, Deluxe Commander and Regal Commander.

The new vehicle is similar in every aspect to the station wagon, except it has provisions for installation of a four-wheel cot, siren, and two-way radio transmitter. Factory delivery price is the same as on the station wagon, and excludes the extra equipment.

"SHOW ON WHEELS" is taken from town to town in Italy by young artists. The group headed by the man above (left) use their cars as galleries to show their works. A passerby stops to admire the art.

Army Contracts Extended for 3 Firms

Defense contracts of three automotive companies which were to expire at the end of June have been renewed by the Detroit Ordnance tank-automotive command. Included in the extension of assignments are Chrysler Corp., GMC Truck & Coach Division and Reo Motors, Inc.

Chrysler, which has been turn-

ing out ¾-ton trucks for the Army, had its contract, valued at $270 million, stretched out to the end of July, and GMC and Reo, whose combined contracts since first let amount to more than $876 million, had theirs lengthened until October. Both GMC and Reo have been producing 2½-ton trucks for the Army.

Human error causes most accidents

The "real villain" in most traffic accidents is human carelessness, according to the American Petroleum Industries Committees in an analysis of 1953 accident figures carried in its Tax Economic Bulletin.

State reports dealing with highway fatalities "reveal that more than nine out of every ten highway deaths nowadays are caused by driver errors or by a combination of driver and pedestrian errors," the Bulletin declares. "In these cases, there were no reported defects in the road, vehicle or other factors beyond human control."

In 1953 there were 27,200 fatalities in rural areas in contrast to 11,100 deaths in urban areas.

As to the reason for this disparity, "it is believed that a large part of the answer lies in the greatest single cause of death on the highway—excessive speed—which is an all too familiar phenomenon of the wide-open rural highway, but a relative rarity on crowded city streets," the publication states.

Pa. Turnpike inspects vehicles

A little over a year ago the Pennsylvania Turnpike Commission ordered a vehicle inspection campaign under which all vehicles, whether private or commercial or regardless where licensed, must halt for inspection before passing through the entrance gates. Since this program was inaugurated, more than 8,500 vehicles have been refused admittance to the Pennsylvania Turnpike.

Developments of SAE summer meeting

Many interesting developments were discussed by prominent engineers at the recent SAE summer meeting in Atlantic City.

One entire evening was devoted to turbine-driven vehicles and power plant installation. In addition, new approaches to chassis, suspension, brakes, body and performance were covered. General acceptance of the gas turbine for road equipment depends on future developments, such as fuel economy, reduced acceleration time and a suitable braking system.

A symposium was held on new developments in crankcase oils. Petroleum company technologists discussed the new multi-grade crankcase oils, 5W-20 and 10W-30, and their performance in service. Data produced showed that they reduced fuel and oil consumption

(*Continued on page* 164)

SAE Meeting . . . . Continued from Page 163

in addition to functioning better in a wide range of temperature and viscosity conditions. Another paper described an oil containing special additives that is claimed to prevent hydraulic valve lifters from sticking.

Several methods were presented at the pre-ignition symposium for determining and analyzing the relation of pre-ignition and combustion chamber deposits.

Plans for 38th NADA convention

The Convention Committee of the National Automobile Dealers Association met recently to draft plans for the 38th annual NADA convention, to be held in Chicago from January 29 to February 2, 1955.

Following the committee meeting in the Sheraton-Cadillac Hotel, convention chairman Frank H. Yarnall announced that the profit picture will be the theme.

The 1955 NADA Convention Committee met in Detroit recently to draft plans for the 38th Annual NADA Convention to be held in Chicago from January 29 to February 2, 1955.

Seated, left to right, are Frank Collord, NADA's Secretary and Director for Iowa; Frank H. Yarnall, NADA's First Vice President and Chairman of the Convention Committee; A. C. Hall, NADA Director for Wisconsin; and Harry B. Craycroft, NADA Director for Illinois.

Looking on is Ray Chamberlain, NADA's Director of Conventions and Exhibitions. Edward L. Cleary, not pictured, is the ATAM representative to the 1955 Committee.

ASBE to discuss new body trends

Technical papers on dream cars and the testing of new bodies will kick off the annual three-day convention of the American Society of Body Engineers, which will open October 27 in Detroit. Commercial bodies, new trends and colors will be the subjects discussed on the second day of the convention, while body materials, body die engineering and the development of engineers will occupy the closing date program. Leading suppliers of automotive body parts will display their latest products at the convention.

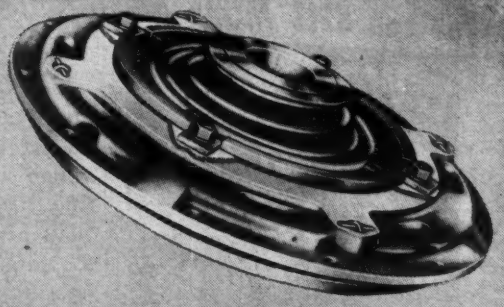
GM gets patent for fuel strainer

General Motors has been assigned the patent covering a new magnetic fuel strainer which removes tiny particles of iron in gasoline before they get to the carburetor. The device was developed by two Lansing, Mich., men. Tests indicate that iron particles are the principal offenders in clogging fuel strainers.

"Repair" Lipe Clutches at a Higher Profit

install a

FACTORY EXCHANGE UNIT



Take Less Time

No time spent on clutch disassembly, inspection, parts hunting, assembly, testing. You save high labor costs.

Do More Jobs

Customers are in and out quicker—you can service more trucks in a given time.

Cut Out Comebacks

Factory Exchange Units are made, assembled and tested by the same workmen who build new Lipe clutches. They're *guaranteed* right.

Make More Money

Reduced labor costs . . . ability to handle more jobs . . . customer satisfaction—all add up to a more profitable operation for you!

Lipe's Factory Exchange Program
Makes Dollars and Sense!

Plan to use a Lipe Factory Exchange Unit on your next job. Contact your jobber today—or write for name of nearest authorized distributor.

LIPE ROLLWAY

Lipe - ROLLWAY CORPORATION

Manufacturers of Automotive Clutches and Machine Tools

Syracuse 1, N. Y.

Lancia Aurelia

Continued from Page 45

sign and almost eliminates the usual tunnel. The V-6 engine, which is not new to the Lancia line, has a larger bore and stroke than previous models and develops 87 horsepower at 4300 rpm. Displacement is 2266 cubic centimeters.

An interesting feature of the Lancia is the use of aluminum doors, hood, deck lid and fenders. There is no centerpost used on the body.

The Lancia's rear axle arrangement, shown on page 45, is unusual. As mentioned previously, the clutch, transmission and rear axle assemblies are in a unit at the rear. The rear wheels are independently sprung by semi-elliptic springs. The rear brake assemblies are located inside, at the differential housing. Thus there is a minimum of unsprung weight at the rear.

Go In Business For Yourself

Here's a clever idea printed in the *Missouri Mule:*

"If you cannot refrain from drinking, why not start a saloon in your home? Be the only customer and you will not have to buy a license. Give your wife $55.00 to buy a case of whiskey. There are 240 snorts in a case. Buy all your drinks from your wife at $.60 a snort; and, in twelve days, when the case is gone, your wife will have $89.00 to put in the bank and will have $55.00 to start up in business again. If you live ten years and continue to buy all your liquor from your wife, and then die in your boots from the snakes, your widow will have $27,085.47 on deposit—enough to bury you respectfully, bring up the children, pay off the mortgage on the house, marry a decent man, and forget she ever knew you."

Boy: Honey, I've told you time and again there's only one girl in the world for me.

Girl: Yes, but you haven't told me her name.

8 to 1

you'll sell 'em!

Gambling? — not us. We know the facts. Surveys show that products with familiar brand names are preferred *eight times out of nine*. So just make sure which brands your customers want, and stock them. Makes sense, doesn't it?

Products with trusted brand names bring you many benefits: lower sales costs because they are so thoroughly pre-sold through their makers' powerful advertising and promotional material; fewer markdowns because of fast turnover; fewer adjustments because responsible manufacturers back up their products; best of all, lasting good will.

Yes, odds are 8 to 1 in your favor . . . and lots more's in your favor besides, when you stock the brands that sell the most.

* * *

How do YOU push the brands that boost your business? Your method could win you national attention and local prestige in the Brand Name Retailer-of-the-Year competition. Write for details.

BRAND NAMES FOUNDATION
INCORPORATED
A Non-Profit Educational Foundation
37 West 57 Street, New York 19, N.Y.

FOR THE BUSINESS YOU WANT, PROMOTE THE BRANDS THEY WANT

Calendar of Coming Events

Dealers Conventions

August—Automobile Dealers Assoc. of West Virginia, Greenbriar Hotel, White Sulphur Springs.
Sept. 10-11 — Colorado Automobile Dealers Assoc., Broadmoor Hotel, Colorado Springs.
Sept. 10-12—Maine Automobile Dealers Assoc. Convention, Samoset Hotel, Rockland.
Sept. 12-13—South Dakota Automobile Dealers Association, Alex Johnson Hotel, Rapid City, S. Dak.
Sept. 12-14—New York State Automobile Dealers' Convention, Saranac Inn, Saranac.
Sept. 16-18 New Mexico Automotive Dealers Assn. Convention, Hotel Hilton, Albuquerque.
Sept. 17—Kansas Automobile Dealers Association, Broadview Hotel, Wichita.
Sept. 19-20 — Automobile Dealers Assoc. of North Dakota Convention, Fargo.
Sept. 20-21 — Minnesota Automobile Dealers Assoc. Convention, Nicollet Hotel, Minneapolis.
Sept. 20-21 — Wisconsin Automotive Trades Assoc. Convention, Hotel Schroeder, Milwaukee.
Sept. 23-24—New Jersey Automotive Trade Assoc. Convention, Atlantic City.
Sept. 28-29 — New Hampshire Automobile Dealers Association, Wentworth-by-the-Sea Hotel, Newcastle, N. H.
Sept. 28-29 — Automobile Dealers Assn. of Alabama, Inc., Convention, Buena Vista Hotel, Biloxi, Miss.
Oct. 3-4—Oklahoma Automobile Dealers Association Convention Skirvin Hotel, Oklahoma City.
Oct. 3-5 — Automobile Dealers Assoc. of Alabama Convention, Biloxi, Miss.
Oct. 8-9 — Pennsylvania Automotive Assoc. Convention, Haddon Hall, Atlantic City, N. J.
Oct. 10-12 — Texas Automotive Dealers Assoc. Convention, Gunter Hotel, San Antonio.
Oct. 10-12 — Mississippi Automobile Dealers Association, Buena Vista Hotel, Biloxi, Miss.
Oct. 17-18 — Georgia Automobile Dealers Assoc. Convention, General Oglethorpe Hotel, Savannah.
Oct. 17-19—Arizona Automobile Dealers Association, Westward Ho Hotel, Phoenix.
Oct. 17-19 — Tennessee Automotive Assoc. Convention, Peabody Hotel, Memphis.
Oct. 21-23—New Mexico Automobile Show, Albuquerque.
Oct. 23-25 — Arkansas Automobile Dealers Assoc. Convention, Hotel Marion, Little Rock.
Oct. 24-26—Florida Automobile Dealers Assoc. Convention, Hotel George Washington, Jacksonville.
Oct. 26 — Connecticut Automotive Trade Assoc. Convention, Hartford.
Nov. 7-9 — Ohio Automobile Dealers Assoc. Convention, Hotel Mayflower, Akron.

(*Continued on page* 170)

"6,000 employees . . ."

A. W. STEUDEL
President
Sherwin-Williams Company

"Naturally, we of Sherwin-Williams give complete endorsement to the Payroll Savings Plan. But we feel that mere approval of a national thrift movement that contributes so much to the personal security of our employees and the economic stability of our country is not enough. In our continuing effort to build employee participation in our Plan, we utilize the personal contacts and enthusiasm of our enrolled Payroll Savers. A recent person-to-person canvass* by our employees *put a Payroll Savings application blank in the hands of every man and woman in our plants and offices. The result, nearly 6,000 serious savers were added to our Payroll Savings Plan."

The personal interest of executives like Mr. Steudel, and the systematic bond purchases of more than 8,000,000 enrolled Payroll Savers are reflected in the following figures:

- In March, 1954, purchases of U.S. Savings Bonds, Series E and H, by *individuals* reached $474 million, highest March figure in 9 years—a gain of 20% over March, 1953.
- Purchases of E and H Bonds, by *individuals* during the first quarter of 1954, totaled $1,380 million—the highest for any quarter since 1945.
- The *cash value* of Series E and H Bonds held by *individuals* at the end of March, 1954, was $37 billion, 175 million—the highest in the thirteen year history of the Savings Bond program.
- Payroll Savers are serious savers: over 75% of the amount of Series E Bonds that matured since May, 1951—almost $9 billion—is still being held by individuals under the Treasury's 10 year optional automatic extension plan.
- For the third straight month of 1954, sales of E and H Bonds exceeded maturities and redemptions. The sales excess amounted to $242 million on March 31—the highest first quarter net since 1950.

If employee participation in your Payroll Savings Plan is less than 50%—or if your company does not have a Payroll Savings Plan, get in touch with Savings Bonds Division, U.S. Treasury Department, Washington, D.C. Your State Director, U.S. Treasury Department, will be glad to help you install a Plan and build employee participation.

The United States Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

MOTOR AGE

Calendar . . .

Continued from Page 168

Nov. 7-9—Automotive Trade Association of Virginia, John Marshall Hotel, Richmond.

Nov. 7-9—Kentucky Automobile Dealers Assoc. Convention, Kentucky Hotel, Louisville.

No. 14-16—National Used Car Dealers Association Convention, Empress Hotel, Miami Beach, Fla.

Nov. 20 — Utah Automobile Dealers Assn. Convention, Newhouse Hotel, Salt Lake City.

Nov. 29-Dec. 1 — Idaho Automobile Dealers Assoc. Convention, Boise Hotel, Boise.

Dec. 2-4—Montana Automobile Dealers Association, Florence Hotel, Missoula, Montana.

Dec. 8 — Milwaukee County Automobile Dealers Assoc. Convention, Milwaukee, Athletic Club, Milwaukee.

Automobile Shows

Aug. 16-18 — Society of Automotive Engineers (National West Coast Meeting) Los Angeles.

Sept. 20-22—Truck, Body & Equipment Association, Inc., Hotel Statler, Buffalo.

Sept. 23-25 — Automotive Parts Rebuilders Association Convention and Parts Show, Morrison Hotel, Chicago.

Oct. 25-27 — Nat'l Assoc. of Independent Tire Dealers, Sherman Hotel, Chicago.

Dec. 6-7 — National Standard Parts Assoc., Hotel Sherman, Chicago.

"On-The-Job" Training For Auto Mechanics

The state of Wisconsin is going all out to provide vocational training for its young folks right where it is most effective—"on the job." A number of these apprenticeship programs have already gotten under way among the various industries of the state. The Industrial Commission of Wisconsin has set up a standard program in regard to the extent of apprenticeship, school attendance, schedule of processes to be worked, compensation to be paid and special provisions for apprentices. In the Automotive Industry—service and repair shops—the program follows the form described below.

At the service and repair shops of Al Shallock, Inc., in Milwaukee, in which this apprenticeship program is being used, four apprentices are now on the job. Four others have graduated and are now regular mechanics. Semi-monthly meetings are held by the company, at which time instructions are given and the apprentices get assignments for study. In addition, the apprentices go to the Milwaukee Vocational School each week for a total of 576 hours or the equivalent. At Al Shallock, Inc., it is not obligatory that students stay with the company, but they usually do after graduating.

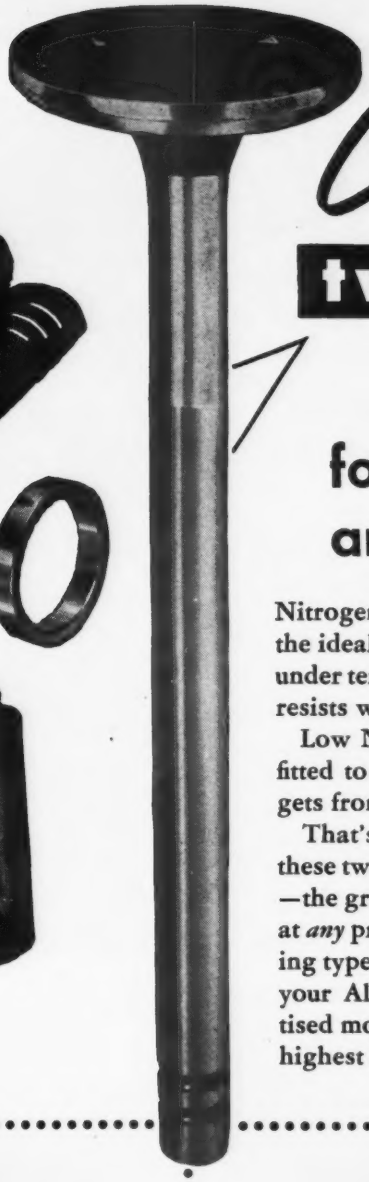
The term apprenticeship, as set forth by the commission, is 8320 hours. In this time the apprentice gets instruction and experience that enables him to qualify as a competent all-around journeyman automotive mechanic at the completion of training.

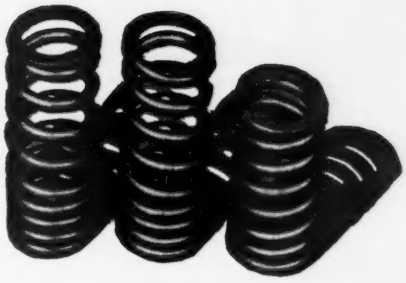
The rate of pay for an apprentice is increased upon completion of each 1040 hour segment of the course. Starting at 40% of a journeyman's rate his pay reaches 90% while completing the final 1040 hours of experience and instruction.

In the U. S. there is one motor vehicle for every three persons. Throughout the world, the ratio goes to one vehicle for every 30 persons.

Index to Advertisers

This Advertisers' Index is published as a convenience, and not as part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert





Allied A.P.C.

two metal VALVES

for extra service, and performance

Nitrogen-treated Austenitic Stainless Steel makes the ideal valve head because it holds its strength under terrific heat, won't batter out of shape, and resists warpage and corrosion.

Low Nickel-Chromium Steel is the alloy best fitted to take the terrific pounding the valve-tip gets from cam and tappets.

That's why Allied-A.P.C. permanently fuses these two *specialized* steels into one exhaust valve —the greatest value you can offer your customers at *any* price. Available in conventional and rotating types . . . Stellite-Faced . . . Sodium Filled. See your Allied Jobber for these nationally advertised motor parts, all engineered and built to the highest standards of accuracy.

Allied MOTOR PARTS

ALLIED MOTOR PARTS COMPANY • DETROIT 1, MICHIGAN

Pistons • Cylinder Sleeves • Cylinder Sleeve Assemblies • Piston Pins Piston Pin Bushings • Piston Pin Set Screws • Piston Pin Lock Rings Valves • Valve Guides • Valve Keys • Valve Springs • Hardened Valve Seat Inserts • Expansion Plugs • Water Pumps • Water Pump Parts and Packing

Classified Advertisements

Sales Representative Wanted. Soliciting orders for the remarkable Milesmaster Fuel Pressure Regulator on commission basis. Protected territory. Schneider Carburetor Co., 6218 Clayton Avenue, St. Louis 10, Mo.

WANTED: Manufacturers representatives to sell Car-Desk to jobbers, chains and dealers. Fast selling retailer at $2.50. Entirely new and different and excellent market potential. LAD MANUFACTURING COMPANY, 800 44th Avenue N., Nashville, Tennessee.

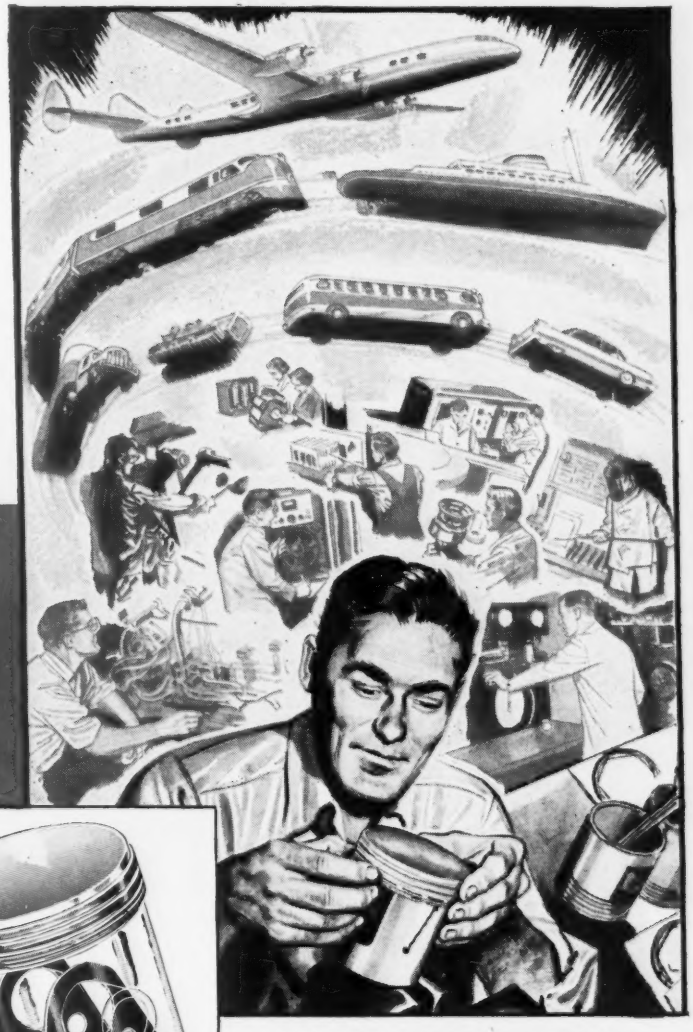
Buick Dealership-GMC, Kansas. One owner past thirty-five years. High gross, long lease, low rent. Here is your opportunity to line up with America's third place car. Owners age forces retirement. will sell for equipment and inventory. Free pictures on request. Continental, 804 Grand, Kansas City, Missouri.

$10,000 a year selling the Jibo Tire Truing Lathe. Fastest selling, newest profit maker in the industry. Nationally advertised and Nationally known. Straight commission. Exclusive in your state. $400.00 starts you. See ad in this issue. National Auto Supply. Dept. A 401 S. Minnesota, Wichita, Kansas.

Buy Bonds

RAMCO *EXTRA* ENGINEERING

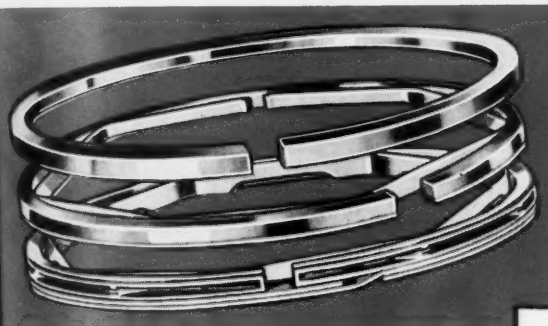
means *EXTRA* Quick Seating...*EXTRA* Customer Satisfaction!



EXTRA ENGINEERING

means 1,200,000 Engineering-Man-hours every year!

Think of it! For every hour you spend installing Ramco Rings, you get the benefit of 500 man-hours of engineering! That's because, back of Ramco Rings is an engineering and research team of over 500 outstanding car, truck, tractor, diesel and aircraft technicians. This Ramsey-Thompson team is the largest at the disposal of any ring manufacturer!



EXTRA ENGINEERING

means you get Chrome where you need it!

Of course, not every ring job calls for chrome, as proven by billions of trouble-free miles on Ramco 10-Up rings. However, when, according to Ramco *Extra* Engineering experience, the engine design calls for chrome, you get it with Ramco! What's more, you need not risk customer dissatisfaction with excessive high pressure chrome rings. Ramco's *Extra* Engineered chrome rings seat *EXTRA*-QUICK! That's because Ramco uses chrome only in combination with quick-seating cast iron. Call for Ramcrome sets. You'll get "P" sets with chrome on three steel ring segments or "H" sets when Ramco's *Extra* Engineering calls for chrome on the top ring, too.

EXTRA ENGINEERING

means a better, more profitable way to repair collapsed pistons!

These new Ramco Skirt Expanders are an example of Ramco *Extra* Engineering at work. Badly-collapsed pistons need no longer endanger your profits on "low cost" ring jobs. New factory-adjusted spring tension assures "just right" wall pressures for each type and size of piston!

You Profit All-Ways with RAMCO 10 up Piston Rings

...they're extra-engineered!

Ramsey Corporation, St. Louis 6, Missouri, A subsidiary of Thompson Products, Inc.

Neoprene covers at regular prices!

With Thermoid *Neoprene-Covered* Fan Belts, you can sell superior quality at prices no higher than ordinary belts.

The Neoprene covers resist oil, heat and abrasion—serve your customer better.

Thermoid Fan Belts are *pre-stretched* to prevent slipping, stretching and sagging.

20 sizes cover 90% of the market. You get faster turnover with less inventory ...make more money!

And a real good deal for you!

Large, colorful Thermoid Thermometer is included with the popular 20 belt assortment. 12 inch diameter ... made of light, non-rusting aluminum...weather-sealed for accuracy.

PLUS Attractive assortment of advertising posters, mailing folders and post cards, together with time-saving wall chart with complete fan belt and hose application data.

Thermoid

Thermoid Company • Trenton, New Jersey

Brake Linings • Fan Belts • Radiator Hose • Hydraulic Brake Parts and Fluid • Car Mats • Clutch Facings • Thermoid Precision Process Equipment